

Kevin's Review - 85 NCLEX Practice Questions

1. The name selected by the original manufacturer based on the chemical structure of the drug is the:

- A. Chemical name
- B. Drug name
- C. Generic name
- D. Trade name

Correct Answer: C. Generic name

The generic name is the name of the active ingredient. The generic name is granted by the USAN Council and is commonly used to identify a drug during its useful clinical lifetime. Each medicine has an approved name called the generic name. A group of medicines that have similar actions often have similar-sounding generic names. For example, phenoxymethylpenicillin, ampicillin, amoxicillin, and flucloxacillin are in one group of antibiotics.

- **Option A:** A chemical name is given when a new chemical entity (NCE) is developed. The chemical name is a scientific name based on the compound's chemical structure (e.g., 6-thioguanine) and is almost never used to identify the drug in a clinical or marketing situation.
- **Option B:** The drug name does not exist. A marketed drug has three names: a chemical name, a generic name, and a brand name. The process for naming a marketable drug involves five steps: NCE submission and patent application, generic naming, brand naming, FDA review, and final approval.
- **Option D:** For drugs that make it all the way through development, testing, and regulatory acceptance, the pharmaceutical company then gives the drug a trade name, which is a standard term in the pharmaceutical industry for a brand name or trademark name.

2. The client went to the emergency room with a sudden onset of chest pain and difficulty of breathing. Which of the following results is indicative that the client is experiencing a myocardial infarction?

- A. Myoglobin level of 98 mcg/L.
- B. Troponin T of 0.09 ng/mL.
- C. Troponin I 0.5 ng/mL.
- D. Creatine kinase (CK-MB) 155 units/L.

Correct Answer: A. Myoglobin level of 98 mcg/L.

The normal value of myoglobin is lower than 90 mcg/L; An elevation could indicate a myocardial infarction. Myoglobin, an oxygen-carrying protein found in cardiac muscle and striated skeletal muscle, presents an attractive alternative to CPK and LDH in the emergency department setting for identification of acute myocardial infarction. Myoglobin levels may be elevated in the serum within one hour after myocardial cell death with peak levels reached within four to six hours.

- **Option B:** The troponin T level is normal. Cardiac troponin T is measured in nanograms per milliliter (ng/mL). If the client's troponin T level is above the 99th percentile for the test being used, the doctor will likely diagnose a heart attack. Levels that start high and fall suggest a recent injury to the heart. It could be a mild heart attack.

- **Option C:** The troponin I level is normal. High levels of troponin are an immediate red flag. The higher the number, the more troponin — specifically troponin T and I — has been released into the bloodstream, and the higher the likelihood of heart damage. Troponin levels can elevate within 3-4 hours after the heart has been damaged and can remain high for up to 14 days.
- **Option D:** Creatine kinase level has a normal value. The ECG and the determination of serum enzymes creatine phosphokinase (CPK) and lactate dehydrogenase (LDH) may be falsely normal early in acute myocardial infarction.

3. Mr. Howard, a 45-year-old patient, presents to the dermatology clinic with concerns about progressive hair thinning. After discussing the potential causes, Dr. Smith delves deeper into the science behind hair growth and explains the stages of the hair growth cycle. During this conversation, Dr. Smith mentions a phase in which the hair follicle starts to shrink and gradually detaches from the hair bulb. This results in the cessation of hair growth and ultimately leads to the hair strand falling out. Which term from the given options best describes this transitional stage?

- A. Catagen
- B. Anagen
- C. Collagen
- D. Telogen

Correct Answer: A. Catagen

The catagen phase is the transitional phase of the hair growth cycle. During the catagen phase, the hair follicle undergoes involution, or shrinkage, and begins to detach from the dermal papilla (hair bulb). This stage typically lasts a few weeks. Hair growth stops, and the hair strand is cut off from its nourishing blood supply. Over time, the hair eventually falls out.

- **Option B:** Anagen is the active growth phase of the hair follicle where new hair cells are rapidly produced at the hair bulb, resulting in the continuous lengthening of the hair shaft. This phase can last for several years, and the hair typically grows about half an inch (1.25 cm) per month during this period.
- **Option C:** Collagen is the most abundant protein in the human body and plays a crucial role in maintaining the skin's strength, structure, and elasticity. It forms a supportive framework for tissues and contributes to skin's firmness and resilience, but collagen production can decrease with age, leading to wrinkles and sagging skin.
- **Option D:** Telogen is the resting phase of the hair growth cycle, during which the hair follicle is no longer actively producing new hair cells. Hair in the telogen phase remains in place but is not growing, and this phase can last for several weeks to several months before the hair eventually falls out and is replaced by a new hair shaft in the anagen phase.

4. In a dedicated pediatric nephrology clinic, Nurse Anderson is meeting with the distressed parents of 6-year-old Emma, who has been recently diagnosed with acute poststreptococcal glomerulonephritis (APSGN). The parents are fraught with worry and seeking a deeper understanding of the illness that has befallen their child. Nurse Anderson, with a wealth of knowledge and a

compassionate demeanor, embarks on an educational journey with Emma's parents to elucidate the intricacies of APSGN, including its etiology and the nexus between antecedent infections and the onset of this renal disorder. The nurse aims to demystify the pathophysiological links, offering a semblance of clarity in a complex and challenging situation. A part of this educational endeavor involves discussing known antecedent infections that can trigger acute glomerulonephritis. Among the following infections, which one should Nurse Anderson prioritize while educating Emma's parents regarding antecedent infections in acute glomerulonephritis?

- A. Scabies
- B. Impetigo
- C. Herpes simplex
- D. Varicella
- E. Streptococcal pharyngitis
- F. Epstein-Barr Virus (EBV)
- G. Hepatitis B

Correct Answer: B. Impetigo

Impetigo, particularly when caused by certain strains of group A streptococci, is a well-recognized antecedent infection associated with acute poststreptococcal glomerulonephritis. Nurse Anderson should prioritize discussing Impetigo (and possibly streptococcal pharyngitis, if the option is available) as they are well-recognized antecedent infections associated with acute poststreptococcal glomerulonephritis, which will aid in fostering a deeper understanding of APSGN etiology for Emma's parents.

- **Option A:** Scabies is caused by mites and is not typically associated with the development of acute glomerulonephritis.
- **Option C:** Herpes simplex virus is not typically associated with the development of acute glomerulonephritis.
- **Option D:** While there have been some cases where Varicella (chickenpox) infection preceded acute glomerulonephritis, it's not as well-recognized as streptococcal infections in this context.
- **Option E:** While not one of the options originally provided, Streptococcal pharyngitis is a well-recognized antecedent infection associated with acute poststreptococcal glomerulonephritis, similar to Impetigo.
- **Option F:** Although EBV can be associated with various renal complications, it's not a well-recognized antecedent for acute glomerulonephritis compared to streptococcal infections.
- **Option G:** Chronic Hepatitis B infection has been associated with membranous glomerulonephritis but not typically acute poststreptococcal glomerulonephritis.

5. Which of the following signs and symptoms would most likely be found in a client with mitral regurgitation?

- A. Exertional dyspnea

- B. Confusion
- C. Elevated creatine phosphokinase concentration
- D. Chest pain

Correct Answer: A. Exertional dyspnea

Weight gain, due to fluid retention and worsening heart failure, causes exertional dyspnea in clients with mitral regurgitation. The rise in left atrial pressure that accompanies mitral valve disease is transmitted backward into pulmonary veins, capillaries, and arterioles and eventually to the right ventricle. Signs and symptoms of pulmonary and systemic venous congestion follow.

- **Option B:** On auscultation, S1 may be diminished in acute mitral regurgitation (MR) and chronic severe MR with defective valve leaflets, and wide splitting of S2 may occur due to early closure of the aortic valve. S3 may be present due to LV dysfunction or as a result of increased blood flow across the mitral valve.
- **Option C:** Usually holosystolic, may be confined to early systole in acute MR, may be confined to late systole in MVP or papillary muscle dysfunction (S1 will probably be normal in these cases since initial closure of mitral valve cusps is unimpeded, and a midsystolic click preceding murmur is suggestive of MVP)
- **Option D:** Murmurs are usually high-pitched, blowing. Usually best heard over the apex; usually radiates to the left axilla or subscapular region: posterior leaflet dysfunction causes murmur to radiate to the sternum or aortic area, and anterior leaflet dysfunction causes murmur to radiate to the back or top of the head.

6. A high school student comes in the triage area alert and ambulatory, and his uniform is soaked with blood. He and his classmates are sounding, “We were running around outside the school and he got hit in the abdomen with a stick!” Which statement should be a priority?

- A. "The stick was absolutely filthy and muddy."
- B. "He has a family history of diabetes, so he requires attention right now."
- C. "He pulled the stick out because it was too painful for him."
- D. "There was plenty of blood so we used three gauzes."

Correct Answer: C. “He pulled the stick out because it was too painful for him.”

An impaled object may be giving a tamponade effect, and removal can result in abrupt hemodynamic decompensation. Surgery is often required; impaled objects are secured in place so that they do not move and they should only be removed in an operating room.

- **Option A:** Penetrating trauma often causes damage to internal organs resulting in shock and infection. The severity depends on the body organs involved, the characteristics of the object, and the amount of energy transmitted.
- **Option B:** Information such as the dirt on the stick or history of diabetes, is significant in the overall treatment plan but can be addressed next. The indications for surgical intervention include a patient with hemodynamic instability, development of peritoneal findings such as involuntary guarding, point tenderness or rebound tenderness, and diffuse abdominal pain that does not resolve.
- **Option D:** Additional history including a more precise extent of blood loss, depth of penetration, and medical history should be collected. If the pancreas is injured, further injury occurs from

autodigestion. Injuries of the liver often present in shock because the liver tissue has a large blood supply.

7. ACEs participate in the renin-angiotensin-aldosterone system to have which of the following physiologic effects?

- A. Inhibit conversion of angiotensin II to angiotensin I.
- B. Vasoconstriction and sodium depletion.
- C. Promote sodium and water retention.
- D. Stimulate vasodilation and inhibit sodium depletion.

Correct Answer: C. Promote sodium and water retention.

Angiotensin is a potent vasoconstrictor that stimulates the release of aldosterone. Aldosterone release promotes sodium and water retention. The renin–angiotensin–aldosterone system (RAAS) is a critical regulator of blood volume and systemic vascular resistance. While the baroreceptor reflex responds in a short-term manner to decreased arterial pressure, the RAAS is responsible for more chronic alterations. It is composed of three major compounds: renin, angiotensin II, and aldosterone.

- **Option A:** The conversion of angiotensin I to II is not inhibited. The conversion of angiotensin I to angiotensin II is catalyzed by an enzyme called angiotensin-converting enzyme (ACE). ACE is found primarily in the vascular endothelium of the lungs and kidneys. After angiotensin I is converted to angiotensin II, it has effects on the kidney, adrenal cortex, arterioles, and brain by binding to angiotensin II type I (AT) and type II (AT) receptors.
- **Option B:** Aldosterone promotes sodium retention, not depletion. Aldosterone is a steroid hormone that causes an increase in sodium reabsorption and potassium excretion at the distal tubule and collecting duct of the nephron. Aldosterone works by stimulating the insertion of luminal Na channels and basolateral Na-K ATPase proteins. The net effect is an increased level of sodium reabsorption.
- **Option D:** The effect of angiotensin II on vasoconstriction takes place in systemic arterioles. Here, angiotensin II binds to G protein-coupled receptors, leading to a secondary messenger cascade that results in potent arteriolar vasoconstriction. This acts to increase total peripheral resistance, causing an increase in blood pressure.

8. A client is being tapered off opioids and the nurse is watchful for signs of withdrawal. What is one of the first signs of withdrawal?

- A. Fever
- B. Nausea
- C. Diaphoresis
- D. Abdominal cramps

Correct Answer: C. Diaphoresis

Diaphoresis is one of the early signs that occur between 6 and 12 hours. Fever, nausea, and abdominal cramps are late signs that occur between 48 and 72 hours. According to Diagnostic and Statistical Manual of Mental Disorders (DSM–5) criteria, signs, and symptoms of opioid withdrawal include lacrimation or rhinorrhea, piloerection “goose flesh,” myalgia, diarrhea, nausea/vomiting, pupillary

dilation and photophobia, insomnia, autonomic hyperactivity (tachypnea, hyperreflexia, tachycardia, sweating, hypertension, hyperthermia), and yawning.

- **Option A:** A fever can be a withdrawal symptom among people who have been addicted to various substances, or even after a period of intense substance use. Fever symptoms may range from mild to severe. Although mild fevers can accompany a variety of substance withdrawal syndromes and are usually self-limiting, fever can also be a component of a particularly dangerous type of alcohol withdrawal.
- **Option B:** Prolonged use of these drugs changes the way nerve receptors work in the brain, and these receptors become dependent upon the drug to function. If the client becomes physically sick after he stops taking an opioid medication, it may be an indication that he's physically dependent on the substance.
- **Option D:** The symptoms the client is experiencing will depend on the level of withdrawal he is experiencing. Also, multiple factors dictate how long a person will experience the symptoms of withdrawal. Because of this, everyone experiences opioid withdrawal differently. However, there's typically a timeline for the progression of symptoms.

9. A woman comes into the ER in a severe state of anxiety following a car accident. The most appropriate nursing intervention is to:

- A. Remain with the client.
- B. Put the client in a quiet room.
- C. Teach the client deep breathing.
- D. Encourage the client to talk about their feelings and concerns.

Correct Answer: A. Remain with the client.

If a client with severe anxiety is left alone; the client may feel abandoned and become overwhelmed. Remain with the client at all times when levels of anxiety are high (severe or panic); reassure the client of his or her safety and security. The client's safety is an utmost priority. A highly anxious client should not be left alone as his anxiety will escalate.

- **Option B:** Placing the client in a quiet room is also important, but the nurse must stay with the client. Move the client to a quiet area with minimal stimuli such as a small room or seclusion area (dim lighting, few people, and so on.) Anxious behavior escalates by external stimuli. A smaller or secluded area enhances a sense of security as compared to a large area which can make the client feel lost and panicked.
- **Option C:** Teaching the client deep breathing or relaxation is not possible until the anxiety decreases. Encourage the client's participation in relaxation exercises such as deep breathing, progressive muscle relaxation, guided imagery, meditation and so forth. Relaxation exercises are effective nonchemical ways to reduce anxiety.
- **Option D:** Encouraging the client to discuss concerns and feelings would not take place until the anxiety has decreased. Observe for increasing anxiety. Assume a calm manner, decrease environmental stimulation, and provide temporary isolation as indicated. Early detection and intervention facilitate modifying a client's behavior by changing the environment and the client's interaction with it, to minimize the spread of anxiety.

10. Cervical softening and uterine souffle are classified as which of the following?

- A. Diagnostic signs
- B. Presumptive signs
- C. Probable signs
- D. Positive signs

Correct Answer: C. Probable signs

Cervical softening (Goodell sign) and uterine soufflé are two probable signs of pregnancy. Probable signs are objective findings that strongly suggest pregnancy. Other probable signs include Hegar sign, which is softening of the lower uterine segment; Piskacek sign, which is an enlargement and softening of the uterus; serum laboratory tests; changes in skin pigmentation; and ultrasonic evidence of a gestational sac.

- **Option A:** There are no diagnostic signs classified in pregnancy changes.
- **Option B:** Presumptive signs are subjective signs and include amenorrhea; nausea and vomiting; urinary frequency; breast tenderness and changes; excessive fatigue; uterine enlargement; and quickening.
- **Option D:** Positive signs of pregnancy are those signs that are definitely confirmed as a pregnancy. They include fetal heart sounds, ultrasound scanning of the fetus, palpation of the entire fetus, palpation of fetal movements, x-ray, and actual delivery of an infant.

11. Following a full-thickness (third-degree) burn of his left arm, a male client is treated with artificial skin. The client understands postoperative care of artificial skin when he states that during the first 7 days after the procedure, he will restrict:

- A. Range of motion
- B. Protein intake
- C. Going outdoors
- D. Fluid ingestion

Correct Answer: A. Range of motion

To prevent disruption of the artificial skin's adherence to the wound bed, the client should restrict range of motion of the involved limb.

- **Options B & D:** Protein intake and fluid intake are important for healing and regeneration and shouldn't be restricted.
- **Option C:** Going outdoors is acceptable as long as the left arm is protected from direct sunlight.

12. A postpartum primipara asks the nurse, "When can we have sexual intercourse again?" Which of the following would be the nurse's best response?

- A. "Anytime you both want to."
- B. "As soon as you choose a contraceptive method."

- C. "When the discharge has stopped, and the incision is healed."
- D. "After your 6 weeks examination."

Correct Answer: C. "When the discharge has stopped and the incision is healed."

Cessation of the lochial discharge signifies healing of the endometrium. The risk of hemorrhage and infection are minimal 3 weeks after a normal vaginal delivery.

- **Option A:** Telling the client anytime is inappropriate because this response does not provide the client with the specific information she is requesting.
- **Option B:** Choice of a contraceptive method is important, but not the specific criteria for safe resumption of sexual activity.
- **Option D:** Culturally, the 6-weeks' examination has been used as the time frame for resuming sexual activity, but it may be resumed earlier.

13. A researcher wants to discover why patients of certain ethnic backgrounds are reluctant to ask for pain medication. Because there is little data in the literature on this topic, the researcher designs a study to explore the relationships between cultural belief systems, the experience of pain, and the effective use of medication to relieve pain. The researcher plans to use the findings of this study to formulate hypotheses for a future study. What is a characteristic of this study?

- A. It is a quasi-experimental study.
- B. It will lead to level II data.
- C. It has a directional hypothesis.
- D. It is a hypothesis-generating study.

Correct Answer: D. It is a hypothesis-generating study.

Not enough is known in this area at this time to formulate hypotheses, so the researcher will conduct this qualitative study and use the findings to generate hypotheses for future studies. In hypothesis-generating research, the researcher explores a set of data searching for relationships and patterns and then proposes hypotheses that may then be tested in some subsequent study.

- **Option A:** This is a qualitative study, not a quasi-experimental study. Qualitative research involves collecting and analyzing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, or experiences. Qualitative research is the opposite of quantitative research, which involves collecting and analyzing numerical data for statistical analysis.
- **Option B:** Level II evidence is obtained from at least one well-designed randomized, controlled trial. Evidence is obtained from at least one well-designed RCT (e.g. large multi-site RCT). Levels of evidence (sometimes called hierarchy of evidence) are assigned to studies based on the methodological quality of their design, validity, and applicability to patient care. These decisions give the "grade (or strength) of recommendation."
- **Option C:** This study has no hypothesis. A directional hypothesis is a prediction made by a researcher regarding a positive or negative change, relationship, or difference between two variables of a population.

14. Alexandra is tasked to organize the new wing of the hospital. She was given the authority to do as she deems fit. She is aware that the director of nursing has substantial trust and confidence in her capabilities, communicates through downward and upward channels, and usually uses the ideas and opinions of her staff. Which of the following is her style of management?

- A. Benevolent –authoritative
- B. Consultative
- C. Exploitive-authoritative
- D. Participative

Correct Answer: B. Consultative

A consultative manager is almost like a participative manager. The participative manager has complete trust and confidence in the subordinates, always uses the opinions and ideas of subordinates, and communicates in all directions. Consultative leadership is a leadership style that targets team building and uses the skills of others to create plans and make decisions. Leaders consult with their team to obtain their suggestions and opinions to help them make informed and strategic decisions.

- **Option A:** In the benevolent-autocratic leadership style, the manager has condescending confidence and trust in subordinates, motivates with rewards and some punishments, permits some upward communication, solicits some ideas and opinions from subordinates, and allows some delegation of decision making but with close policy control.
- **Option C:** In the exploitative-authoritative leadership style, the manager has no confidence or trust in subordinates. Subordinates feel no freedom to discuss things about the job with their superiors. In solving job problems, the manager seldom gets the ideas and opinions of subordinates.
- **Option D:** Participative leadership is a style of leadership in which all members of the organization work together to make decisions. Participative leadership is also known as democratic leadership, as everyone is encouraged to participate. The participative leadership decision-making process can take many forms, but the key element is collective input from all members of the organization.

15. Francis tells the nurse that her coworkers are sabotaging the computer. When the nurse asks questions, the client becomes argumentative. This behavior shows personality traits associated with which of the following personality disorders?

- A. Antisocial
- B. Histrionic
- C. Paranoid
- D. Schizotypal

Correct Answer: C. Paranoid

Because of their suspiciousness, paranoid personalities ascribe malevolent activities to others and tend to be defensive, becoming quarrelsome and argumentative. Paranoid personality disorder (PPD) is one of a group of conditions called “Cluster A” personality disorders which involve odd or eccentric ways of thinking. People with PPD also suffer from paranoia, an unrelenting mistrust and suspicion of others, even when there is no reason to be suspicious.

- **Option A:** Clients with antisocial personality disorder can also be antagonistic and argumentative but are less suspicious than paranoid personalities. Antisocial personality disorder (ASPD) is a deeply ingrained and rigid dysfunctional thought process that focuses on social irresponsibility with exploitive, delinquent, and criminal behavior with no remorse. Disregard for and the violation of others' rights are common manifestations of this personality disorder, which displays symptoms that include failure to conform to the law, inability to sustain consistent employment, deception, manipulation for personal gain, and incapacity to form stable relationships.
- **Option B:** Clients with histrionic personality disorder are dramatic, not suspicious and argumentative. Histrionic personality disorder, or dramatic personality disorder, is a psychiatric disorder distinguished by a pattern of exaggerated emotionality and attention-seeking behaviors. Histrionic personality disorder falls within the "Cluster B" of personality disorders. Cluster B personality disorders include conditions such as narcissistic personality disorder, borderline personality disorder, and antisocial personality disorder. These personality disorders are commonly described as dramatic, excitable, erratic, or volatile.
- **Option D:** Clients with schizoid personality disorder are usually detached from others and tend to have eccentric behavior. The schizoid personality type was made official in DSM III in 1980, to describe persons experiencing significant ineptitude in forming meaningful social relationships. Isolation is a salient feature in the history of a schizoid patient. Rarely do they have close relationships, and often they will choose to participate in occupations that are solitary in nature. They infrequently experience strong emotion, express little to no desire for sexual activity with a partner, and tend to be ambivalent to criticism or praise.

16. A community nurse conducts a primary prevention, home-visit assessment for a newborn and mother. Mrs. Smith has three other children, the oldest of whom is age 12. She tells the nurse that her 12-year-old daughter is expected to prepare family meals, to look after the young children, and to clean the house once a week. Which of the following is the most appropriate nursing diagnosis for this family situation?

- A. Delayed growth and development, related to performance expectations of the child.
- B. Anxiety (moderate), related to difficulty managing the home situation.
- C. Impaired parenting, related to the role reversal of mother and child.
- D. Social isolation, related to lack of extended family assistance.

Correct Answer: C. Impaired parenting, related to role reversal of mother and child.

The role of a 12-year-old child in a family should not be that of a parent. In this situation, the child and mother have reversed roles. Assess parents for the achievement of developmental tasks of self and understanding of child's growth and development; how they are bonded and attached to the child; how they interpret and respond to the child; how they accept and support the child; how they meet the child's social, psychological and physical needs. Provides information about parent-child relationship and parenting styles that may lead to child abuse; identifies parents at risk for violence or other abusive behavior.

- **Option A:** Teach parents developmental tasks for child and parents, difference in developmental level between child and parents, and appropriate tasks for age levels. Provides information that assists parents in responding realistically and appropriately to child's needs at different age levels.
- **Option B:** Assess the level of anxiety and fear in the child and how it is manifested; Determine the source of anxiety and note reactions to staff and parents at each contact. Provides information

about the source and level of anxiety and what might relieve it and basis to judge improvement.

- **Option D:** There is no evidence that the child has delayed growth or development, the mother in this situation is not demonstrating signs of anxiety, and there is no evidence in this situation that the family is socially isolated. Discuss with parents methods to reduce conflict, to be consistent in approach to child's behavior and needs, to avoid siding with the child or other parents. Promotes a more positive child-parent relationship.

17. A 1-year-old child is diagnosed with scabies. Which of the following medicines is expected to be prescribed?

- A. Permethrin
- B. Lindane
- C. Both
- D. None

Correct Answer: A. Permethrin

Permethrin and Lindane are used against scabies, but lindane is contraindicated for children below two years old because of the risk of seizures and neurotoxicity. Topical permethrin 5% cream is effective and widely used. The cream is typically applied once a week for two weeks (a total of 2 treatments). However, this treatment is occasionally associated with scabies resistance, poor patient compliance, and rare allergic reactions.

- **Option B:** Other options are topical lindane, 5% precipitated sulfur, malathion, and topical ivermectin. Lindane Lotion is contraindicated for premature infants because their skin may be more permeable than that of full-term infants and their liver enzymes may not be sufficiently developed to metabolize Lindane.
- **Option C:** Permethrin has not been approved by the FDA for use in infants before the age of 2 months, and limited studies have taken place to assess the use of this medication in these patients. However, some recent research suggests that 5% permethrin cream can be safely used to treat scabies in this infant population.
- **Option D:** For classical scabies, 5% permethrin cream is applied topically to cool, dry skin from the patient's head to the patient's toes and under the fingernails. The cream is washed off after 8 to 14 hours and is often reapplied in the same way one week later.

18. Biperiden hydrochloride (Akineton) is added to a list of antiparkinsonian medications that an elderly client is taking. Which of the following instructions made by the nurse that needs further learning?

- A. Avoiding alcohol and caffeine.
- B. Using ice chips, candy or gum for dry mouth.
- C. Walking in the morning to have a daily source of direct sunlight.
- D. Eating foods rich in fiber and increase fluid intake.

Correct Answer: C. Walking in the morning to have a daily source of sunlight.

Biperiden hydrochloride (Akineton) is an anticholinergic antiparkinson agent used to treat the stiffness, tremors, spasms, and poor muscle control of Parkinson's disease. Photophobia is one of the side effects of this medication so instruct the client to use sunglasses in direct sunlight.

- **Options A, B, & D:** These are correct instructions regarding the use of this medication.

19. The client says “ the FBI is out to get me.” The nurse’s best response is:

- A. “The FBI is not out to catch you.”
- B. “I don’t believe that.”
- C. “I don’t know anything about that. You are afraid of being harmed.”
- D. “ What made you think of that.”

Correct Answer: C. “I don’t know anything about that. You are afraid of being harmed.”

This presents reality and acknowledges the client’s feelings. Interact with clients on the basis of things in the environment. Try to distract the client from their delusions by engaging in reality-based activities (e.g., card games, simple arts and crafts projects etc). When thinking is focused on reality-based activities, the client is free of delusional thinking during that time. Helps focus attention externally.

- **Option A:** Initially do not argue with the client’s beliefs or try to convince the client that the delusions are false and unreal. Arguing will only increase a client’s defensive position, thereby reinforcing false beliefs. This will result in the client feeling even more isolated and misunderstood.
- **Option B:** This statement is not a therapeutic response because these disagree with the client’s false belief and makes the client feel challenged. Attempt to understand the significance of these beliefs to the client at the time of their presentation. Important clues to underlying fears and issues can be found in the client’s seemingly illogical fantasies.
- **Option D:** This statement is an unnecessary exploration of the false. Identify feelings related to delusions. If a client believes someone is going to harm him/her, the client is experiencing fear. When people believe that they are understood, anxiety might lessen.

20. A nurse is reviewing the complete blood count (CBC) of a child who has been diagnosed with idiopathic thrombocytopenic purpura. Which of the following laboratory results should the nurse report immediately to the physician?

- A. Platelet count of 30,000/mm³.
- B. Hemoglobin level of 7.5 g/dL.
- C. Reticulocyte count of 6.5%.
- D. Eosinophil count of 700 cells/mm³.

Correct Answer: B. Hemoglobin level of 7.5 g/dL.

The low hemoglobin level indicates that the client has active bleeding, and immediate actions such as additional diagnostic exams and blood transfusions can be suggested. An initial impression of the severity of ITP is formed by examining the skin and mucous membranes. Widespread petechiae and ecchymoses, oozing from a venipuncture site, gingival bleeding, and hemorrhagic bullae indicate that the patient is at risk for a serious bleeding complication.

- **Option A:** Decreased platelet count is expected in a child with idiopathic thrombocytopenic purpura. Immune thrombocytopenia (ITP) is a syndrome in which platelets become coated with autoantibodies to platelet membrane antigens, resulting in splenic sequestration and phagocytosis by mononuclear macrophages. The resulting shortened life span of platelets in the circulation, together with incomplete compensation by increased platelet production by bone marrow megakaryocytes, results in a decreased number of circulating platelets.
- **Option C:** Increased reticulocyte is expected in a child with idiopathic thrombocytopenic purpura. The measurement of the content of hemoglobin of reticulocytes (CHr or Ret-He) reflects the synthesis of hemoglobin in marrow precursors and allows the detection of early stages of iron deficiency.
- **Option D:** An increased eosinophil count is expected in a child with idiopathic thrombocytopenic purpura. Many authors have reported associations between the increased numbers of eosinophils with platelet dysfunctions, such as increased bleeding time, reduction in platelet aggregation induced by various agonists, among other disorders.

21. Nurse Kate is reviewing the complications of conization with a client who has microinvasive cervical cancer. Which complication, if identified by the client, indicates a need for further teaching?

- A. Hemorrhage
- B. Ruptured ovarian cyst
- C. Infection
- D. Cervical stenosis

Correct Answer: B. Ruptured ovarian cyst

- **Option B:** Ruptured ovarian cyst is not a complication. This usually occurs after a strenuous exercise and after sexual intercourse.
- **Options A, C, and D:** Conization procedure involves the removal of a cone-shaped area of the cervix. Complications of the procedure include hemorrhage, infection, and cervical stenosis.

22. A female client with a history of pheochromocytoma is admitted to the hospital in an acute hypertensive crisis. To reverse hypertensive crisis caused by pheochromocytoma, nurse Lyka expects to administer:

- A. mannitol (Osmitol)
- B. methyldopa (Aldomet)
- C. phentolamine (Regitine)
- D. felodipine (Plendil)

Correct Answer: C. phentolamine (Regitine)

Pheochromocytoma causes excessive production of epinephrine and norepinephrine, natural catecholamines that raise the blood pressure. Phentolamine, an alpha-adrenergic blocking agent given by I.V. bolus or drip, antagonizes the body's response to circulating epinephrine and norepinephrine, reducing blood pressure quickly and effectively.

- **Option A:** Mannitol, a diuretic, isn't used to treat hypertensive emergencies. Mannitol can be used for the reduction of intracranial pressure and brain mass, to reduce intraocular pressure if this is not achievable by other means, to promote diuresis for acute renal failure to prevent or treat the oliguric phase before irreversible damage, and to promote diuresis to promote excretion of toxic substances, materials, and metabolites.
- **Option B:** Although methyldopa is an antihypertensive agent available in parenteral form, it isn't effective in treating hypertensive emergencies. Methyldopa is a medication used in the management and treatment of hypertension. It is in the centrally acting anti-hypertensive class of drugs.
- **Option D:** Felodipine, an antihypertensive agent, is available only in extended-release tablets and therefore doesn't reduce blood pressure quickly enough to correct hypertensive crisis. Felodipine is an agent in the dihydropyridine class of calcium channel blockers. Felodipine is FDA approved and indicated in the treatment of essential hypertension. Reduction in blood pressure lowers the risk of cardiovascular morbidity and mortality.

23. Which of the following is included in Orem's theory?

- A. Maintenance of a sufficient intake of air.
- B. Self perception.
- C. Love and belongingness.
- D. Physiologic needs.

Correct Answer: A. Maintenance of a sufficient intake of air.

Dorothea Orem's Self-Care Theory defined Nursing as "The act of assisting others in the provision and management of self-care to maintain or improve human functioning at home level of effectiveness." The Self-Care or Self-Care Deficit Theory of Nursing is composed of three interrelated theories: (1) the theory of self-care, (2) the self-care deficit theory, and (3) the theory of nursing systems, which is further classified into wholly compensatory, partial compensatory and supportive-educative. Choices B, C, and D are from Abraham Maslow's Hierarchy of Needs.

- **Option B:** At the fourth level in Maslow's hierarchy is the need for appreciation and respect. When the needs at the bottom three levels have been satisfied, the esteem needs begin to play a more prominent role in motivating behavior. At this point, it becomes increasingly important to gain the respect and appreciation of others. People have a need to accomplish things and then have their efforts recognized. In addition to the need for feelings of accomplishment and prestige, esteem needs include such things as self-esteem and personal worth.
- **Option C:** The social needs in Maslow's hierarchy include such things as love, acceptance, and belonging. At this level, the need for emotional relationships drives human behavior. In order to avoid problems such as loneliness, depression, and anxiety, it is important for people to feel loved and accepted by other people. Personal relationships with friends, family, and lovers play an important role, as does involvement in other groups that might include religious groups, sports teams, book clubs, and other group activities.
- **Option D:** The basic physiological needs are probably fairly apparent—these include the things that are vital to our survival. In addition to the basic requirements of nutrition, air and temperature regulation, the physiological needs also include such things as shelter and clothing. Maslow also included sexual reproduction in this level of the hierarchy of needs since it is essential to the survival and propagation of the species.

24. The nurse provides wound care for a client 48 hours after a burn injury. To achieve the desired outcome of the procedure, which nursing action will be carried out first?

- A. Applies silver sulfadiazine (Silvadene) ointment
- B. Covers the area with an elastic wrap
- C. Places a synthetic dressing over the area
- D. Removes loose nonviable tissue

Correct Answer: D. Removes loose nonviable tissue

The first step in this process is removing exudates and necrotic tissue. Burn patients are at high risk for infection, especially drug-resistant infection, which often results in significantly longer hospital stays, delayed wound healing, higher costs, and higher mortality

- **Option A:** Since the adoption of topical antibiotics, such as mafenide in the 1960s and silver sulfadiazine in the 1970s, and of early excision and grafting in the 1970s and thereafter, systemic infections and mortality have consistently decreased. However, Gram-positive and Gram-negative bacterial infections still remain one of the most common causes of mortality following burn injury.
- **Option B:** While many factors must be considered in dressing selection, the goals in selecting the most appropriate dressing should include providing protection from contamination (bacterial or otherwise) and from physical damage, allowing gas exchange and moisture retention, and providing comfort to enhance functional recovery.
- **Option C:** The selection of an appropriate dressing depends on several factors, including depth of burn, condition of the wound bed, wound location, desired moisture retention and drainage, required frequency of dressing changes, and cost.

25. A client is diagnosed with prostate cancer. Which test is used to monitor the progression of this disease?

- A. Serum creatinine
- B. Complete blood cell count (CBC)
- C. Prostate-specific antigen (PSA)
- D. Serum potassium

Correct Answer: C. Prostate-specific antigen (PSA)

The PSA test is used to monitor prostate cancer progression; higher PSA levels indicate a greater tumor burden. Elevated Prostate-Specific Antigen (PSA) levels (usually greater than 4 ng/ml) in the blood is how 80% of prostate cancers initially present even though elevated PSA levels alone correctly identify prostate cancer only about 25% to 30% of the time. We recommend at least 2 abnormal PSA levels or the presence of a palpable nodule on DRE to justify a biopsy and further investigation.

- **Option A:** Serum creatinine levels may suggest blockage from an enlarged prostate. The percentage of free PSA in the blood can be a useful indicator of malignancy. If the total PSA is between 4 and 10 ng/ml, a free PSA percentage is considered valid. The free PSA percentage is calculated by multiplying the free PSA level by 100 and dividing by the total PSA value.
- **Option B:** CBC is used to diagnose anemia and polycythemia. Prostate Cancer Antigen 3 (PCA3) is an RNA-based genetic test performed from a urine sample obtained immediately after a prostate

massage. PCA3 is a long, non-coding RNA molecule that is overexpressed exclusively in prostatic malignancies. It is upregulated 66 fold in prostate cancers. If PCA3 is elevated, it suggests the presence of prostate cancer.

- **Option D:** Serum potassium levels identify hypokalemia and hyperkalemia. PCA3 is best used to determine the need for a repeat biopsy after initial negative histology. Serial PCA3 testing may also be helpful in monitoring patients with low-grade prostate cancers on active surveillance.

26. What statement indicates the client needs further education regarding skin grafting (allografting)?

- A. "Because the graft is my own skin, there is no chance it won't 'take.'"
- B. "For the first few days after surgery, the donor sites will be painful."
- C. "I will have some scarring in the area when the skin is removed for grafting."
- D. "I am still at risk for infection after the procedure."

Correct Answer: A. "Because the graft is my own skin, there is no chance it won't 'take.'"

Factors other than tissue type, such as circulation and infection, influence whether and how well a graft will work. The client should be prepared for the possibility that not all grafting procedures will be successful. Graft survival depends on the diffusion of nutrients and oxygen from the wound bed known as imbibition. Inosculation then follows when the blood vessels of the graft and from the wound bed grow together to make end-to-end contact. Lastly, neovascularization occurs when new blood vessels grow from the wound bed into the graft.

- **Option B:** The donor sites will be painful after the surgery. Silicone gel sheets, along with pressure dressings, have shown a dramatic decrease in pain, pruritis, and scar thickness six months after burn injury.
- **Option C:** There can be scarring in the area where the skin is removed for grafting. Burn scars are a common occurrence after skin grafting and can cause anxiety, depression, pain, itching, altered pigmentation, temperature intolerance, and decreased range of motion secondary to scar contracture. Scar formation is propagated by deficiencies in the biosynthetic and tissue degradation pathway during wound healing.
- **Option D:** The client is still at risk for infection. Early failure of graft survival is attributable to seroma and hematoma formation, which lifts the graft off the wound bed, preventing imbibition. Other factors that lead to graft failure include shearing forces, edematous tissue, and infected tissue.

27. An elderly nursing home resident has refused to eat or drink for several days and is admitted to the hospital. The nurse should expect which assessment finding?

- A. Increase blood pressure
- B. Weak, rapid pulse
- C. Moist mucous membranes
- D. Jugular vein distention

Correct Answer: B. Weak, rapid pulse

All other options are indicated by fluid volume excess. A client who has not eaten or drunk anything for several days would be experiencing a fluid volume deficit. The primary control of water homeostasis is through osmoreceptors in the brain. Dehydration, as perceived by these osmoreceptors, stimulates the thirst center in the hypothalamus, which leads to water consumption. These osmoreceptors can also cause conservation of water by the kidney. When the hypothalamus detects lower water concentration, it causes the posterior pituitary to release antidiuretic hormone (ADH), which stimulates the kidneys to reabsorb more water.

- **Option A:** Decreased blood pressure, which often accompanies dehydration triggers renin secretion from the kidney. Renin converts angiotensin I to angiotensin II, which increases aldosterone release from the adrenals. Aldosterone increases the absorption of sodium and water from the kidney. Using these mechanisms, the body regulates body volume and sodium and water concentration.
- **Option C:** Some of the most common presenting symptoms of dehydration include but are not limited to fatigue, thirst, dry skin and lips, dark urine or decreased urine output, headaches, muscle cramps, lightheadedness, dizziness, syncope, orthostatic hypotension, and palpitations. The physical examination could show dry mucosa, skin tenting, delayed capillary refill, or cracked lips.
- **Option D:** A 2015 Cochrane review evaluated predictors of dehydration in the elderly. Historical and physical findings tested were dry axilla, mucous membranes, tongue, increased capillary refill time, poor skin turgor, sunken eyes, orthostatic blood pressure drop, dizziness, thirst, urine color, weakness, blue lips, altered mentation, tiredness, and appetite. Of all these factors only fatigue and missed drinks between meals predicted the diagnosis of dehydration.

28. The nurse caring for a client receiving intravenous magnesium sulfate must closely observe for side effects associated with drug therapy. An expected side effect of magnesium sulfate is:

- A. Decreased urinary output
- B. Hypersomnolence
- C. Absence of knee jerk reflex
- D. Decreased respiratory rate

Correct Answer: B. Hypersomnolence

The client is expected to become sleepy, have hot flashes, and be lethargic. Patients most commonly complain of minor facial flushing and warmth with the administration; however, symptoms typically resolve spontaneously. In patients with neuromuscular disease, such as in myasthenia gravis, the neuromuscular function may become worse at lower concentrations of medication.

- **Option A:** Magnesium levels must be monitored frequently by checking serum levels every 6 to 8 hours or clinically by following patellar reflexes or urinary output. If serum concentration levels are low, a proper dose of magnesium sulfate can be given parenterally to replete low serum concentrations with recommended follow up laboratory testing.
- **Option C:** If the patient is on a continuous magnesium sulfate infusion, serum levels must be accounted for as symptoms related to hypermagnesemia may become clinically evident. At supratherapeutic serum concentrations, absent reflexes, abnormal cardiac conduction, and muscle weakness may occur.
- **Option D:** Decreased respirations indicate a magnesium sulfate toxicity. If patients exhibit signs and symptoms of hypermagnesemia, the recommendation is to discontinue magnesium sulfate

products immediately. If the patient consumed magnesium sulfate orally, then the use of magnesium-free enemas or cathartics can be useful in removing excess magnesium from the GI tract.

29. A 26-year-old female client seeks care for a possible infection. Her symptoms include burning on urination and frequent, urgent voiding of small amounts of urine. She's placed on trimethoprim-sulfamethoxazole (Bactrim) to treat possible infection. Another medication is prescribed to decrease the pain and frequency. Which of the following is the most likely medication prescribed?

- A. Nitrofurantoin (Macrochantin)
- B. Ibuprofen (Motrin)
- C. Acetaminophen with codeine
- D. Phenazopyridine (Pyridium)

Correct Answer: D. Phenazopyridine (Pyridium)

Phenazopyridine may be prescribed in conjunction with an antibiotic for painful bladder infections to promote comfort. Because of its local anesthetic action on the urinary mucosa, phenazopyridine specifically relieves bladder pain. Adjunctive therapy with phenazopyridine for several days may help provide symptom relief. Even without treatment, the UTI will spontaneously resolve in about 20% of women. The likelihood that a female will develop acute pyelonephritis is very small.

- **Option A:** Nitrofurantoin is a urinary antiseptic with no analgesic properties. Nitrofurantoin is a good choice for uncomplicated UTI, but it is bacteriostatic, not bactericidal, and must be used for 5 to 7 days. Nitrofurantoin is an antibiotic medication that is used for the treatment of uncomplicated lower urinary tract infection. It is effective against most gram-positive and gram-negative organisms.
- **Option B:** Ibuprofen is a medication used in the management and treatment of inflammatory diseases, rheumatoid disorders, mild to moderate pain, fever, dysmenorrhea, and osteoarthritis. It is in the non-steroidal anti-inflammatory drug (NSAID) class of medications.
- **Option C:** While acetaminophen with codeine is an analgesic, they don't exert a direct effect on the urinary mucosa. Acetaminophen is used to reduce pain and fever. Unlike NSAIDs (nonsteroidal anti-inflammatory drugs), it lacks anti-inflammatory activity. Codeine is a narcotic analgesic (pain reliever) derived from opium. It is used alone and in combination products to treat mild to moderate pain and as a cough suppressant.

30. A pneumonectomy is a surgical procedure sometimes indicated for treatment of non-small-cell lung cancer. A pneumonectomy involves removal of:

- A. One lobe of a lung
- B. An entire lung field
- C. One or more segments of a lung lobe
- D. A small, wedge-shaped lung surface

Correct Answer: B. An entire lung field

- **Option B:** A pneumonectomy is the removal of an entire lung field indicated for the treatment of non-small cell lung cancer that has not spread outside of the lung tissue. It is performed on patients who will have adequate lung function in the unaffected lung.
- **Option D:** A wedge resection refers to the removal of a wedge-shaped section of lung tissue. It may be used to remove a tumor and a small amount of normal tissue around it/
- **Option A:** A lobectomy is the removal of one lobe.
- **Option C:** Removal of one or more segments of a lung lobe is called a partial lobectomy.

31. The nurse develops the following hypothesis: Elderly women receive less aggressive treatment for breast cancer than do younger women. Which variable would be considered to be the independent variable?

- A. Degree of treatment received.
- B. Age of the patient.
- C. Type of cancer being treated.
- D. Use of inpatient treatment.

Correct Answer: B. Age of the patient.

The age of the patient would be the independent variable. Independent variable is the variable that is stable and unaffected by the other variables the researcher is trying to measure. It refers to the condition of an experiment that is systematically manipulated by the investigator. It is the presumed cause.

- **Option A:** The degree of treatment received is considered the dependent variable. Dependent variable is the variable that depends on other factors that are measured. These variables are expected to change as a result of experimental manipulation of the independent variable or variables. It is the presumed effect.
- **Option C:** The type of cancer being treated can be a predictor variable. Predictor variables can be used to predict the value of a dependent variable. Predictor variable is the name given to an independent variable used in regression analyses. The predictor variable provides information on an associated dependent variable regarding a particular outcome. At the most fundamental level, predictor variables are variables that are linked with particular outcomes.
- **Option D:** The use of inpatient treatment is not specified. Researchers often use charts or graphs to visualize the results of their studies. The norm is to place the independent variable on the “x” or horizontal axis and the dependent variable on the “y” or vertical axis.

32. Which statement made by the client with facial burns who has been prescribed to wear a facial mask pressure garment indicates a correct understanding of the purpose of this treatment?

- A. “After this treatment, my ears will not stick out.”
- B. “The mask will help protect my skin from sun damage.”
- C. “Using this mask will prevent scars from being permanent.”
- D. “My facial scars should be less severe with the use of this mask.”

Correct Answer: D. “My facial scars should be less severe with the use of this mask.”

The purpose of wearing the pressure garment over burn injuries for up to 1 year is to prevent hypertrophic scarring and contractures from forming. Hypertrophic burn scars pose a challenge for burn survivors and providers. In many cases, they can severely limit a burn survivor’s level of function, including work and recreational activities.

- **Option A:** The pressure garment will not change the angle of the ear attachment to the head. By applying pressure to the burn or scar, the face mask keeps the skin soft and flat during the scar-forming phase of healing. It helps the face heal with the least amount of scarring. The transparent face mask is worn 18-20 hours every day for 8 months to 2 years until the skin graft is mature.
- **Option B:** Although the mask does provide protection of sensitive newly healed skin and grafts from sun exposure, this is not the purpose of wearing the mask. A widespread modality of prevention and treatment of hypertrophic scarring is the utilization of pressure garment therapy (PGT).
- **Option C:** Scars will still be present. This treatment modality continues to be a clinically accepted practice. It is the most common therapy used for the treatment and prevention of abnormal scars after burn injury particularly in North America, Europe, and Scandinavia where it is considered routine practice and regarded as the preferred conservative management with reported thinning and better pliability ranging from 60% to 85%.

33. The nurse is developing a teaching plan for the client with glaucoma. Which of the following instructions would the nurse include in the plan of care?

- A. Decrease fluid intake to control the intraocular pressure.
- B. Avoid overuse of the eyes.
- C. Decrease the amount of salt in the diet.
- D. Eye medications will need to be administered lifelong.

Correct Answer: D. Eye medications will need to be administered lifelong.

The administration of eye drops is a critical component of the treatment plan for the client with glaucoma. The client needs to be instructed that medications will need to be taken for the rest of his or her life. Stress the importance of meticulous compliance with prescribed drug therapy to prevent an increase in IOP, resulting in disk changes and loss of vision.

- **Option A:** Discuss dietary considerations (adequate fluid, bulk, or fiber intake). Measures to maintain consistency of stool to avoid constipation and straining during defecation. Stress the importance of routine checkups. It is important to monitor the progression and maintenance of disease to allow for early intervention and prevent further loss of vision.
- **Option B:** Encourage the patient to make necessary changes in lifestyle. A tranquil lifestyle decreases the emotional response to stress, preventing ocular changes that push the iris forward, which may precipitate an acute attack.
- **Option C:** Review the importance of maintaining a drug schedule like eye drops. Discuss medications that should be avoided such as mydriatic drops (atropine, propantheline bromide), overuse of topical steroids, and additive effects of [beta]-blocking when systemic [beta]-blocking agents are used.

34. Your patient Maria takes NSAIDs for her degenerative joint disease, and has developed peptic ulcer disease. Which drug is useful in preventing NSAID-induced peptic ulcer disease?

- A. calcium carbonate (Tums)
- B. famotidine (Pepcid)
- C. misoprostol (Cytotec)
- D. sucralfate (Carafate)

Correct Answer: C. misoprostol (Cytotec)

Misoprostol restores prostaglandins that protect the stomach from NSAIDs, which diminish the prostaglandins. Currently, misoprostol is FDA-approved only for the prevention and treatment of NSAID-induced gastric ulcers in patients taking NSAIDs and at high risk for ulceration. It has an indication (but not FDA approved) in the short-term treatment of active duodenal or gastric ulcers with other etiologies.

- **Option A:** Calcium carbonate is an inorganic salt primarily used in the management and treatment of low calcium conditions, GERD, CKD, and a variety of other indicated conditions. It is classified as a calcium supplement, antacid, and as a phosphate binder.
- **Option B:** Famotidine is a competitive histamine H₂-receptor antagonist (H₂RA) that binds to the H₂-receptors located on the basolateral membrane of the parietal cell in the stomach, effectively blocking histamine actions. Its pharmacologic activity results in the inhibition of gastric secretion by suppressing acid concentration and volume of gastric secretion.
- **Option D:** Sucralfate is a medication used to treat duodenal ulcers, epithelial wounds, chemotherapy-induced mucositis, radiation proctitis, ulcers in Behcet disease, and burn wounds. Sucralfate exhibits its action by forming a protective layer, increasing bicarbonate production, exhibiting anti-peptic effects, promoting tissue growth, regeneration, and repair.

35. Which client statement informs the nurse that his teaching about the proper use of an incentive spirometer was effective?

- A. "I should breathe out as fast and as hard as possible into the device."
- B. "I should inhale slowly and steadily to keep the balls up."
- C. "I should use the device three times a day, after meals."
- D. "The entire device should be washed thoroughly in sudsy water once a week."

Correct Answer: B. "I should inhale slowly and steadily to keep the balls up."

Proper use of an SMI requires the client to take slow, steady inhalations, every hour or two, 5 to 10 reps each time. Spirometry is one of the most readily available and useful tests for pulmonary function. It measures the volume of air exhaled at specific time points during complete exhalation by force, which is preceded by a maximal inhalation. The most important variables reported include total exhaled volume, known as the forced vital capacity (FVC), the volume exhaled in the first second, known as the forced expiratory volume in one second (FEV₁), and their ratio (FEV₁/FVC).

- **Option A:** The patient must breathe in as much air as they can with a pause lasting for less than 1s at the total lung capacity. The mouthpiece is placed just inside the mouth between the teeth, soon after the deep inhalation. The lips should be sealed tightly around the mouthpiece to prevent air

leakage. Exhalation should last at least 6 seconds, or as long as advised by the instructor. If only the forced expiratory volume is to be measured, the patient must insert the mouthpiece after performing step 1 and must not breathe from the tube.

- **Option C:** The procedure is repeated in intervals separated by 1 minute until two matching, and acceptable results are acquired. Spirometry has proved to be a crucial tool in diagnosing lung disease, monitoring patients for their pulmonary function, and assessing their fitness for various procedures.
- **Option D:** Only the mouthpiece can be successfully rinsed or wiped clean. The device should not be submerged in water. Spirometry is an apparatus used to assess pulmonary function for diagnostic or monitoring purposes. The procedure must be explained thoroughly to the subject patient by competent personnel who underwent training under supervision by a specialist mentor and will undergo periodic retraining in order to ensure that the results obtained are as accurate as possible and the complications are kept to a minimum.

36. Important teaching for women in their childbearing years who are receiving antipsychotic medications includes which of the following?

- A. Increased incidence of dysmenorrhea while taking the drug.
- B. Occurrence of incomplete libido due to medication adverse effects.
- C. Continuing previous use of contraception during periods of amenorrhea.
- D. Instruction that amenorrhea is irreversible.

Correct Answer: C. Continuing previous use of contraception during periods of amenorrhea

Women may experience amenorrhea, which is reversible while taking antipsychotics. Amenorrhea doesn't indicate cessation of ovulation thus, the client can still be pregnant. Antipsychotic-induced menstrual dysfunction has prevalence rates of approximately 45% for oligomenorrhoea/amenorrhoea and 19% for galactorrhoea (Kinon 2003; Wieck 2003). An illness-related underfunction of the hypothalamic-pituitary-gonadal axis in women with schizophrenia may also contribute to menstrual irregularities. This review will focus on amenorrhoea. In an extensive study conducted in India, the prevalence of amenorrhoea in women on risperidone was 60%.

- **Option A:** Other adverse effects can affect women of reproductive age, who have an increased risk of experiencing endocrinological, metabolic and neurological adverse effects from antipsychotic medication (Seeman 2009). Menstrual dysfunction such as amenorrhoea (absence of menstruation) and oligomenorrhoea (infrequent or light menstruation) has multiple causes which can include developmental problems with reproductive organs, thyroid disease, stress, excessive weight loss, and hyperprolactinemia (high levels of prolactin production).
- **Option B:** Antipsychotic-induced menstrual dysfunction, if not addressed, not only affects compliance with treatment in women suffering from schizophrenia or similar illnesses but also is a major cause of distress. Amenorrhoea can have physical (for example, bone mineral density changes) and psychological consequences that affect well-being (Haddad 2004).
- **Option D:** Typical antipsychotic medications and some of the novel antipsychotics frequently cause an elevation of plasma prolactin levels. Among the several side reactions related to hyperprolactinemia, are menstrual disorders such as amenorrhea or oligomenorrhoea which have not been adequately evaluated.

37. Tonometry is performed on the client with a suspected diagnosis of glaucoma. The nurse analyzes the test results as documented in the client's chart and understands that normal intraocular pressure is:

- A. 2-7 mmHg
- B. 10-21 mmHg
- C. 22-30 mmHg
- D. 31-35 mmHg

Correct Answer: B. 10-21 mmHg

Tonometry is the method of measuring intraocular fluid pressure using a calibrated instrument that indents or flattens the corneal apex. Pressures between 10 and 21 mmHg are considered within the normal range. Tonometry is a common procedure employed by ophthalmologists to measure intraocular pressure (IOP) using a calibrated instrument. Instruments measuring intraocular pressure assume the eye is a closed globe with uniform pressure distributed throughout the anterior chamber and vitreous cavity.

- **Option A:** 2-7 mmHg is low intraocular pressure. Tonometry is used to measure intraocular pressure in open-angle glaucoma, acute closed-angle glaucoma, in the setting of ocular trauma without globe rupture, and before and after ophthalmic surgical procedures.
- **Option C:** 22-30 mmHg indicates an increased intraocular pressure. Measurement of intraocular pressure is important in the screening and monitoring of glaucoma, a progressive optic neuropathy that can be slowed with intraocular pressure reduction. Intraocular pressure is the only modifiable risk factor for glaucoma progression at this time
- **Option D:** 31-35 mmHg is high intraocular pressure. Tonometry is also used to evaluate for acutely elevated intraocular pressure as seen in acute-angle closure glaucoma and following ocular trauma. Acute angle-closure glaucoma is an ophthalmic emergency requiring immediate intervention to lower IOP and avoid vision loss.

38. The nurse is teaching a patient to prepare a syringe with 40 units of U-100 NPH insulin for self-injection. The patient's first priority concerning self-injection in this situation is to:

- A. Assess the injection site.
- B. Select the appropriate injection site.
- C. Check the syringe to verify that the nurse has removed the prescribed insulin dose.
- D. Clean the injection site in a circular manner with an alcohol sponge.

Correct Answer: C. Check the syringe to verify that the nurse has removed the prescribed insulin dose

When the nurse teaches the patient to prepare an insulin injection, the patient's first priority is to validate the dose accuracy. The next steps are to select the site, assess the site, and clean the site with alcohol before injecting the insulin.

- **Option A:** The site the client chooses for the injection should be clean and dry. If the skin is visibly dirty, clean it with soap and water. DO NOT use an alcohol wipe on the injection site. Choose where to give the injection. Keep a chart of places that have been used, so the client does not inject

the insulin in the same place all the time. Ask the doctor for a chart.

- **Option B:** The insulin needs to go into the fat layer under the skin. If the skin tissues are thicker, the client may be able to inject straight up and down (90° angle). Check with the provider before doing this.
- **Option D:** To give an insulin injection, the client needs to fill the right syringe with the right amount of medicine, decide where to give the injection, and know how to give the injection.

39. A client with Addison's disease has been admitted with a history of nausea and vomiting for the past 3 days. The client is receiving IV glucocorticoids (Solu-Medrol). Which of the following interventions would the nurse implement?

- A. Daily weights
- B. Intake/output measurements
- C. Sodium and potassium levels monitored
- D. Glucometer readings as ordered

Correct Answer: D. Glucometer readings as ordered

IV glucocorticoids raise the glucose levels and often require coverage with insulin. Cortisone and prednisone replace cortisol deficits, which will promote sodium reabsorption. Fludrocortisone is a mineralocorticoid for patients who require aldosterone replacement to promote sodium and water replacement. Acute adrenal insufficiency is a medical emergency requiring immediate fluid and corticosteroid administration. If treated for adrenal crisis, the patient requires IV hydrocortisone initially; usually by the second day, administration can be converted to an oral form of replacement.

- **Option A:** Daily weights are unnecessary. Monitor trends in weight. This provides documentation of weight loss trends. Weight loss is a common manifestation of adrenal insufficiency.
- **Option B:** Intake/output measurements are not necessary at this time. Assess vital signs, especially noting BP and HR for orthostatic changes. A BP drop of more than 15 mm Hg when changing from supine to sitting position, with a concurrent elevation of 15 beats per min in HR, indicates reduced circulating fluids.
- **Option C:** Sodium and potassium levels would be monitored when the client is receiving mineralocorticoids. Abnormal laboratory findings include hyperkalemia (related to aldosterone deficiency and decreased renal perfusion), hyponatremia (related to decreased aldosterone and impaired free water clearance), and increase in blood urea nitrogen (related to decreased glomerular filtration from).

40. A female client with Guillain-Barre syndrome has ascending paralysis and is intubated and receiving mechanical ventilation. Which of the following strategies would the nurse incorporate in the plan of care to help the client cope with this illness?

- A. Giving the client full control over care decisions and restricting visitors.
- B. Providing positive feedback and encouraging active range of motion.
- C. Providing information, giving positive feedback and encouraging relaxation.
- D. Providing intravenously administered sedatives, reducing distractions and limiting visitors.

Correct Answer: C. Providing information, giving positive feedback, and encouraging relaxation.

The client with Guillain-Barré syndrome experiences fear and anxiety from the ascending paralysis and sudden onset of the disorder. The nurse can alleviate these fears by providing accurate information about the client's condition, giving expert care and positive feedback to the client, and encouraging relaxation and distraction. The family can become involved with selected care activities and provide diversion for the client as well.

- **Option A:** Allow the client to participate in their own care depending on ability and degree of paralysis; allow them to make informed choices about ADL as soon as possible. Promotes independence and control and preserves developmental status.
- **Option B:** Teach parents and the client about disease condition and manifestation. Provides information to relieve anxiety by knowledge of what to expect. Discuss each procedure or type of may therapy, effects of any diagnostic tests to parents and client as appropriate to age. Reduces fear of the unknown which increases anxiety.
- **Option D:** Therapeutically communicate with parents and child and answer questions in a calm and honest manner. Promotes an environment of support. Facilitate expression of concerns and an opportunity to ask inquiries regarding the condition and rehabilitation of the ailing child. Provides an opportunity to release feelings, secure information needed to overcome anxiety.

41. The hospital administrator had undergone percutaneous transhepatic cholangiography. Which assessment finding indicates complication after the operation?

- A. Fever and chills
- B. Hypertension
- C. Bradycardia
- D. Nausea and diarrhea

Correct Answer: A. Fever and chills

Septicemia is a common complication after a percutaneous transhepatic cholangiography. Evidence of fever and chills, possibly indicative of septicemia, is important. Although PTC may be performed to treat the obstruction that is the cause of sepsis, PTC itself may also cause sepsis. Antibiotics, IV fluids, oxygen, and vasopressors in the setting of an intensive care unit should be considered.

- **Option B:** Hypotension, not hypertension, is associated with septicemia. The Society of Interventional Radiology (SIR) has published complication rates for PTC and PBD. The rate of major complications is around 2% to 10%. Major complications include inducing sepsis, other severe infections (such as an abscess), bile leak/biloma, hemorrhage (subcapsular hematoma, pseudoaneurysm), pneumothorax, and death.
- **Option C:** Tachycardia, not bradycardia, is most likely to occur. Transgression of blood vessels during PTC is to be expected. Coagulation usually occurs successfully, and hemorrhage ceases entirely within 2 to 3 days. Bleeding through the catheter can occur if a catheter side hole is left in communication with a hepatic vessel or if a pseudoaneurysm develops.
- **Option D:** Nausea and diarrhea may occur but are not classic signs of sepsis. If electrolyte depletion occurs due to high-output external drainage, then the electrolytes should be replaced and considerations should be made on converting the catheter to internal drainage as soon as possible.

42. An adult client's insulin dosage is 10 units of regular insulin and 15 units of NPH insulin in the morning. The client should be taught to expect the first insulin peak:

- A. As soon as food is ingested.
- B. In two to four hours.
- C. In six hours.
- D. In ten to twelve hours.

Correct Answer: B. In two to four hours.

The first insulin peak will occur two to four hours after administration of regular insulin. Regular insulin is classified as rapid-acting and will peak two to four hours after administration. The second peak will be eight to twelve hours after the administration of NPH insulin. This is why a snack must be eaten mid-morning and also three to four hours after the evening meal.

- **Option A:** Rapid Acting Insulin Analogs (Insulin Aspart, Insulin Lyspro, Insulin Glulisine) has an onset of action of 5 to 15 minutes, peak effect in 1 to 2 hours, and duration of action that lasts 4-6 hours. With all doses, large and small, the onset of action and the time to peak effect is similar, The duration of insulin action is, however, affected by the dose – so a few units may last 4 hours or less, while 25 or 30 units may last 5 to 6 hours. As a general rule, assume that these insulins have a duration of action of 4 hours.
- **Option C:** Regular Human Insulin has an onset of action of 1/2 hour to 1 hour, peak effect in 2 to 4 hours, and duration of action of 6 to 8 hours. The larger the dose of regular the faster the onset of action, but the longer the time to peak effect and the longer the duration of the effect.
- **Option D:** Long-acting insulin analogs (Insulin Glargine, Insulin Detemir) have an onset of insulin effect in 1 1/2-2 hours. The insulin effect plateaus over the next few hours and is followed by a relatively flat duration of action that lasts 12-24 hours for insulin detemir and 24 hours for insulin glargine.

43. A 6-year-old child with leukemia is hospitalized and is receiving combination chemotherapy. Laboratory results indicate that the child is neutropenic, and the nurse prepares to implement protective isolation procedures. Which interventions would the nurse initiate? Select all that apply.

- A. Restrict all visitors.
- B. Place the child on a low-bacteria diet.
- C. Change dressings using sterile technique.
- D. Encourage the consumption of fresh fruits and vegetables.
- E. Perform meticulous hand washing before caring for the child.
- F. Allow fresh-cut flowers in the room as long as they are kept in a vase with fresh water.

Correct Answer: B, C, & E.

Leukemias are a group of hematologic disorders characterized by the dysfunctional proliferation and development of leukocytes. Many genetic and environmental risk factors have been identified, though the exact cause of most leukemia subtypes is unknown.

- **Option A:** Not all visitors need to be restricted, but anyone who is ill should not be allowed in the child's room. Bone marrow suppression, neutropenia, and chemotherapy place the patient at high risk for infection.
- **Option B:** The child is placed on a low-bacteria diet. Provide a nutritious diet, high in protein and calories, avoiding raw fruits, vegetables, or uncooked meats. Proper nutrition enhances the immune system. Minimizes potential sources of bacterial contamination.
- **Option C:** Dressings are always changed with sterile technique. Provide thorough skin care by keeping the patient's skin and perianal area clean, apply mild lotion or creams to keep the skin from drying or cracking. Thoroughly clean skin before all invasive skin procedures.
- **Option D:** Fruits and vegetables not peeled before being eaten harbor molds and should be avoided until the white blood cell count rises. Restrict fresh fruits and make sure they are properly washed or peeled.
- **Option E:** Meticulous hand washing is required before caring for the child. In addition, gloves, a mask, and a gown are worn (per agency policy). This prevents cross-contamination and reduces the risk of infection.
- **Option F:** For the hospitalized neutropenic child, flowers or plants should not be kept in the room because standing water and damp soil harbor *Aspergillus* and *Pseudomonas*, to which these children are very susceptible.

44. A client is undergoing fluid replacement after being burned 20% of her body 12 hours ago. The nursing assessment reveals a blood pressure of 90/50 mm Hg, a pulse rate of 110 beats per minute, and a urine output of 25 ml over the past hour. The nurse reports the findings to the physician and anticipates which of the following orders?

- A. Increasing the amount of intravenous (IV) lactated Ringer's solution administered per hour.
- B. Transfusing 1 unit of packed red blood cells.
- C. Administering diuretic to increase urine output.
- D. Changing the IV lactated Ringer's solution into dextrose in water.

Correct Answer: A. Increasing the amount of intravenous (IV) lactated Ringer's solution administered per hour.

The client's urine output indicates inadequate fluid resuscitation. Hence the physician would order an increased amount of lactated Ringer's solution administered hourly. Patients with burns of more than 20% – 25% of their body surface should be managed with aggressive IV fluid resuscitation to prevent "burn shock." Urine output of 0.5 mL/kg or about 30 – 50 mL/hr in adults and 0.5-1.0 mL/kg/hr in children less than 30kg is a good target for adequate fluid resuscitation.

- **Option B:** Blood transfusion is not used for fluid resuscitation therapy unless there is an indication of a low hemoglobin level. This response, along with decreased cardiac output and increased vascular resistance, can lead to marked hypovolemia and hypoperfusion called "burn shock." This can be managed with aggressive fluid resuscitation and close monitoring for adequate, but not excessive, IV fluids.
- **Option C:** Diuretic works by removing circulating volume, thereby further compromising the inadequate tissue perfusion. The patient's vital signs, mental status, capillary refill, and urine output must be monitored and fluid rates adjusted accordingly. Again, adequate fluid resuscitation is the goal.

- **Option D:** Dextrose in water will only maintain fluid balance since it is an isotonic solution, therefore will not be helpful in this situation. Four mL lactated ringers solution \times percentage total body surface area (%TBSA) burned \times patient's weight in kilograms = total amount of fluid given in the first 24 hours.

45. Which of the following antituberculosis drugs can damage the 8th cranial nerve?

- A. Isoniazid (INH)
- B. Para Aminosalicic acid (PAS)
- C. Ethambutol hydrochloride (Myambutol)
- D. Streptomycin

Correct Answer: D. Streptomycin

Streptomycin is an aminoglycoside and damage to the 8th cranial nerve (ototoxicity) is a common side effect of aminoglycosides. Ototoxicity and vestibular impairment are often thought to be the hallmark of streptomycin toxicity. In extreme cases, deafness may occur due to ototoxicity, thus caution must be exercised when combining streptomycin with other potentially ototoxic drugs. Vestibular impairment usually manifests during the course of treatment and is typically permanent.

- **Option A:** Isoniazid may cause serious damage to the liver. Isoniazid is metabolized primarily by the liver, by acetylation of N-acetyltransferase 2 (NAT2). Three metabolites have implications that correlate with the liver injury associated with the drug: acetyl hydrazine (AcHz), hydrazine (Hz), and a metabolite from the bioactivation of isoniazid itself. There is considerable variation in acetylation rate and elimination half-life from individual to individual, which is not accounted for by dose and concentration, and this appears to contribute to risk for hepatotoxicity as well as the other adverse effects associated with isoniazid.
- **Option B:** Despite having excellent efficacy against TB in both in vitro experiments and clinical trials, PAS was eventually replaced with better-tolerated ethambutol due to gastrointestinal disturbance associated with the usage of PAS.
- **Option C:** One of the most well-known adverse effects is ototoxicity. The effect of ototoxicity is dose-related, with greater than 40% of adults developing toxicity at doses that were greater than 50 mg/kg and around 0 to 3% of adults developing toxicity at 15 mg/kg/daily. The manifestation of EMB-induced optic neuropathy appears to be from EMB's chelation of copper. A study with 60 patients undergoing treatment with ethambutol monitored their serum copper levels.

46. The nurse is aware that the side effect of electroconvulsive therapy that a client may experience:

- A. Loss of appetite
- B. Postural hypotension
- C. Confusion for a time after treatment
- D. Complete loss of memory for a time

Correct Answer: C. Confusion for a time after treatment

The electrical energy passing through the cerebral cortex during ECT results in a temporary state of confusion after treatment. Cerebral blood flow and intracranial pressure both increase with ECT therapy. Clinically, patients may exhibit confusion, delirium, disorientation, and memory loss. ECT is classified as a low-risk procedure by the AHA-ACC guidelines because it is well-tolerated, and demonstrates only transient hemodynamic lability and low mortality rate.

- **Option A:** Bilateral or bitemporal ECT causes more cognitive impairment than unilateral ECT, although this effect is transient. A meta-analysis of 1415 depressed patients treated with ECT revealed that global cognition, verbal memory, and autobiographical memory were worse with bilateral treatment three days after treatment.
- **Option B:** The clonic phase of the seizure correlates with a catecholamine surge that causes tachycardia and hypertension, which lasts temporally with seizure duration. Hypertension and tachycardia resolve within 10 to 20 minutes of the seizure, although some patients exhibit persistent hypertension that requires medical intervention.
- **Option D:** According to the American Psychiatric Association, patients receiving ECT are at higher risk if they show evidence of unstable or severe cardiovascular disease, a space-occupying intracranial lesion with evidence of elevated intracranial pressure, history of an acute cerebral hemorrhage or stroke, an unstable vascular aneurysm, severe pulmonary disease, or qualify as American Society of Anesthesiologists (ASA) Class 4 or 5.

47. Using Abraham Maslow's hierarchy of human needs, a nurse assigns highest priority to which client need?

- A. Security
- B. Elimination
- C. Safety
- D. Belonging

Correct Answer: B. Elimination

According to Maslow, elimination is a first-level or physiological need and therefore takes priority over all other needs. In 1943, Abraham Maslow developed a hierarchy based on basic fundamental needs innate for all individuals. Maslow's hierarchy of needs is a motivational theory in psychology comprising a five-tier model of human needs, often depicted as hierarchical levels within a pyramid. From the bottom of the hierarchy upwards, the needs are: physiological (food and clothing), safety (job security), love and belonging needs (friendship), esteem, and self-actualization. Security and safety are second-level needs; belonging is a third-level need. Second- and third-level needs can be met only after a client's first-level needs have been satisfied.

- **Option A:** Once an individual's physiological needs are satisfied, the needs for security and safety become salient. People want to experience order, predictability, and control in their lives. These needs can be fulfilled by the family and society (e.g. police, schools, business, and medical care).
- **Option C:** Physiological and safety needs provide the basis for the implementation of nursing care and nursing interventions. For example, emotional security, financial security (e.g. employment, social welfare), law and order, freedom from fear, social stability, property, health, and wellbeing (e.g. safety against accidents and injury).
- **Option D:** After physiological and safety needs have been fulfilled, the third level of human needs is social and involves feelings of belongingness. The need for interpersonal relationships motivates behavior. Examples include friendship, intimacy, trust, and acceptance, receiving and giving affection and love. Affiliating, being part of a group (family, friends, work)

48. You have a paraplegic patient with renal calculi. Which factor contributes to the development of calculi?

- A. Increased calcium loss from the bones.
- B. Decreased kidney function.
- C. Decreased calcium intake.
- D. High fluid intake.

Correct Answer: A. Increased calcium loss from the bones.

Bones lose calcium when a patient can no longer bear weight. The calcium lost from bones form calculi, a concentration of mineral salts also known as a stone, in the renal system. Renal stone disease is a common problem in patients with spinal cord injury. The factors responsible are thought to include hypercalciuria and chronic urinary infection. The urine of all stone patients was oversaturated with calcium phosphate for part of each day. Urinary calcium was elevated in 16% and plasma urate in 30% of the paraplegics studied.

- **Option B:** Specific risk factors for CKD in stone formers include recurrent urinary tract infections, struvite and possibly uric acid stone composition, symptomatic stones, solitary kidney, ileal conduit, neurogenic bladder, and hydronephrosis.
- **Option C:** The effect of calcium supplementation on stone formation is currently controversial. It is likely that large doses of supplemental calcium, especially if taken separately from a meal, may lead to stone formation. When necessary, stone-forming patients should be encouraged to take their calcium supplements with a meal and their stone disease should be monitored.
- **Option D:** Increased water intake is associated with a reduced risk of kidney stones; increased consumption of tea and alcohol may reduce kidney stone risk. An average daily water intake was recommended for kidney stone prevention.

49. The nurse working in the physician's office is reviewing lab results on the clients seen that day. One of the clients who has classic diabetic symptoms had an eight-hour fasting plasma glucose (FPG) test done. The nurse realizes that diagnostic criteria developed by the American Diabetes Association for diabetes include classic diabetic symptoms plus which of the following fasting plasma glucose levels?

- A. Higher than 106 mg/dl
- B. Higher than 126 mg/dl
- C. Higher than 140 mg/dl
- D. Higher than 160 mg/dl

Correct Answer: B. Higher than 126 mg/dl

Diabetes is diagnosed at a fasting blood glucose of greater than or equal to 126 mg/dl. Random venous blood glucose of at or above 11.1mmol/L (?200 mg/dL), or fasting blood glucose at or above 7 mmol/L (?126 mg/dL) on two or more separate occasions indicates the client is likely to have diabetes.

- **Option A:** Prediabetes diagnosis includes impaired fasting glucose range of 5.6 to 6.9 mmol per L, or 100 to 125 mg/dL, or impaired (oral glucose tolerance test) glucose tolerance range at two hours post 75gram oral glucose ingestion of 7.8 to 11.0 mmol, or 140 to 199 mg/dL.
- **Options C and D:** Further testing may involve an oral glucose tolerance test to confirm the diagnosis. Advise the client to eat and drink over 150 grams per day of carbohydrate foods for three days. The client will need to fast overnight for at least 8 to 16 hours before the test. A fasting blood sample is collected, and a sweet drink containing 75 grams of glucose is given to the client after the fasting blood sample collection. A further blood sample is collected at two hours following the consumption of the glucose drink.

50. A nurse is assessing a 56-year-old patient who presents with a persistent cough producing copious thick sputum, noticeable swelling in the lower extremities, and blue-tinged nail beds. The patient has a detailed smoking history of consuming one to two packs of cigarettes daily for 40 years. Considering the patient's history and current symptoms, which of the following conditions does the patient most likely have?

- A. Adult respiratory distress syndrome (ARDS)
- B. Asthma
- C. Chronic obstructive bronchitis
- D. Emphysema
- D. Emphysema
- E. Pulmonary hypertension
- F. Lung cancer

Correct Answer: C. Chronic obstructive bronchitis

The symptoms described for the client, particularly the chronic cough producing thick sputum, peripheral edema, and cyanotic nail beds, along with the long history of significant smoking, are indicative of chronic obstructive bronchitis. Chronic obstructive bronchitis is a type of chronic obstructive pulmonary disease (COPD) characterized by a long-term cough with mucus. Smoking is the most common cause of COPD.

51. The nurse caring for a client in the neonatal intensive care unit administers adult-strength Digitalis to the 3-pound infant. As a result of her actions, the baby suffers permanent heart and brain damage. The nurse can be charged with:

- A. Negligence
- B. Tort
- C. Assault
- D. Malpractice

Correct Answer: D. Malpractice

The nurse could be charged with malpractice, which is failing to perform, or performing an act that causes harm to the client. Giving the infant an overdose falls into this category. In the United States, a patient may allege medical malpractice against a clinician, which is typically defined by the failure to provide the degree of care another clinician in the same position with the same credentials would have performed that resulted in injury to the patient.

- **Option A:** Negligence is failing to perform care for the client. a tort is a wrongful act committed. Negligence, in law, the failure to meet a standard of behaviour established to protect society against unreasonable risk. Negligence is the cornerstone of tort liability and a key factor in most personal injury and property-damage trials.
- **Option B:** A tort is a wrongful act committed on the client or their belongings. A tort is a civil wrong that causes harm to another person by violating a protected right. A civil wrong is an act or omission that is intentional, accidental, or negligent, other than a breach of contract. The specific rights protected give rise to the unique “elements” of each tort. Tort requires the presence of four elements that are the essential facts required to prove a civil wrong.
- **Option C:** Assault is a violent physical or verbal attack. Assault is the intentional act of making someone fear that you will cause them harm. You do not have to actually harm them to commit assault. Threatening them verbally or pretending to hit them are both examples of assault that can occur in a nursing home.

52. A client is admitted to the labor and delivery unit. The nurse performs a vaginal exam and determines that the client’s cervix is 5 cm dilated with 75% effacement. Based on the nurse’s assessment the client is in which phase of labor?

- A. Active
- B. Latent
- C. Transition
- D. Early

Correct Answer: A. Active

The active phase of labor occurs when the client is dilated 4–7cm. Active labor with more rapid cervical dilation generally starts around 6 centimeters of dilation. During the active phase, the cervix typically dilates at a rate of 1.2 to 1.5 centimeters per hour. Multiparas, or women with a history of prior vaginal delivery, tend to demonstrate more rapid cervical dilation. The absence of cervical change for greater than 4 hours in the presence of adequate contractions or six hours with inadequate contractions is considered the arrest of labor and may warrant clinical intervention.

- **Option B:** The latent phase is commonly defined as the 0 to 6 cm, while the active phase commences from 6 cm to full cervical dilation. The presenting fetal part also begins the process of engagement into the pelvis during the first stage. Throughout the first stage of labor, serial cervical exams are done to determine the position of the fetus, cervical dilation, and cervical effacement.
- **Option C:** The transition phase of labor is 8–10cm in dilation. The second stage of labor commences with complete cervical dilation to 10 centimeters and ends with the delivery of the neonate. This was also defined as the pelvic division phase by Friedman. After cervical dilation is complete, the fetus descends into the vaginal canal with or without maternal pushing efforts.
- **Option D:** The latent or early phase of labor is from 1cm to 3cm in dilation. During the latent phase, the cervix dilates slowly to approximately 6 centimeters. The latent phase is generally considerably

longer and less predictable with regard to the rate of cervical change than is observed in the active phase. A normal latent phase can last up to 20 hours and 14 hours in nulliparous and multiparous women respectively, without being considered prolonged.

53. A nonimmunized child appears at the clinic with a visible rash. Which of the following observations indicates the child may have rubeola (measles)?

- A. Small blue-white spots are visible on the oral mucosa.
- B. The rash begins on the trunk and spreads outward.
- C. There is low-grade fever.
- D. The lesions have a "teardrop-on-a-rose-petal" appearance.

Correct Answer: A. Small blue-white spots are visible on the oral mucosa.

Koplik's spots are small blue-white spots visible on the oral mucosa and are characteristic of measles infection. Near the end of the prodrome, Koplik spots (ie, bluish-gray specks or "grains of sand" on a red base) appear on the buccal mucosa opposite the second molars. The Koplik spots generally are first seen 1-2 days before the appearance of the rash and last until 2 days after the rash appears. This enanthem begins to slough as the rash appears. Although this is the pathognomonic enanthem of measles, its absence does not exclude the diagnosis.

- **Option B:** The body rash typically begins on the face and travels downward. Blanching, erythematous macules and papules begin on the face at the hairline, on the sides of the neck, and behind the ears (see the images below). Within 48 hours, they coalesce into patches and plaques that spread cephalocaudally to the trunk and extremities, including the palms and soles, while beginning to regress cephalocaudally, starting from the head and neck. Lesion density is greatest above the shoulders, where macular lesions may coalesce. The eruption may also be petechial or ecchymotic in nature.
- **Option C:** High fever (may spike to more than 104°F) is often present. The first sign of measles is usually a high fever (often >104°F [40°C]) that typically lasts 4-7 days. This prodromal phase is marked by malaise, fever, anorexia, and the classic triad of conjunctivitis (see the image below), cough, and coryza (the "3 Cs").
- **Option D:** "Teardrop on a rose petal" refers to the lesions found in varicella (chickenpox). The characteristic chickenpox vesicle, surrounded by an erythematous halo, is described as a dewdrop on a rose petal

54. When caring for a 3-day-old neonate who is receiving phototherapy to treat jaundice, the nurse in charge would expect to do which of the following?

- A. Turn the neonate every 6 hours
- B. Encourage the mother to discontinue breastfeeding.
- C. Notify the physician if the skin becomes bronze in color.
- D. Check the vital signs every 2 to 4 hours.

Correct Answer: D. Check the vital signs every 2 to 4 hours

While caring for an infant receiving phototherapy for treatment of jaundice, vital signs are checked every 2 to 4 hours because hyperthermia can occur due to the phototherapy lights.

- **Option A:** Only one study reported the significance drop in serum bilirubin and shorter duration of phototherapy in the supine group. Keeping the jaundiced newborn in the supine position throughout phototherapy is as effective as turning them periodically based on appraised studies.
- **Option B:** The baby may be breastfed without interruption during phototherapy. Jaundice in breastfed babies is not a reason to stop breastfeeding as long as a baby is feeding well, gaining weight, and otherwise growing.
- **Option C:** Bronze baby syndrome is a rare complication seen in neonates with hyperbilirubinemia who are being treated with phototherapy. Affected neonates develop gray-brown skin, serum, and urine within a week of initiation of phototherapy.

55. A 4 month-year-old infant has just received diphtheria, tetanus, and acellular pertussis (DtaP). Hours later, the mother reports to the clinic because her child develops redness and swelling at the injection site. The nurse instructs the mother to do which of the following?

- A. Application of cold compress
- B. Application of hot compress
- C. Monitor for signs of fever
- D. Report to the clinic for a repeat injection on the other site

Correct Answer: A. Application of cold compress

Redness, tenderness, or swelling may happen at the site of injection. This will be relieved through cool application for the first 24 hours, followed by warm compress if inflammation persists.

- **Option B:** The child may have a fever, soreness, and some swelling and redness in the area where the shot was given. For pain and fever, check with a doctor to see if either acetaminophen or ibuprofen can be given, and to find out the right dose. A warm, damp cloth or a heating pad on the injection site may help reduce soreness, as can moving or using the arm.
- **Option C:** The vaccine can cause mild side effects: fever; mild crankiness; tiredness; loss of appetite; and tenderness, redness, or swelling in the area where the shot was given. Rarely, a child may have a seizure, a high fever, or uncontrollable crying after getting the vaccine. But these sorts of side effects are so rare that researchers question whether they're even caused by the vaccine. Most kids have a few minor or no side effects.
- **Option D:** Call a physician if not sure whether the vaccine should be postponed or avoided. Children who have had certain problems with the DTaP vaccine usually can safely receive the Td (tetanus and diphtheria) vaccine.

57. To assess the kidney function of a patient with an indwelling urinary (Foley) catheter, the nurse measures his hourly urine output. She should notify the physician if the urine output is:

- A. Less than 30 ml/hour
- B. 64 ml in 2 hours
- C. 90 ml in 3 hours
- D. 125 ml in 4 hours

Correct Answer: A. Less than 30 ml/hour

A urine output of less than 30ml/hour indicates hypovolemia or oliguria, which is related to kidney function and inadequate fluid intake. Urine output is a noninvasive method to measure fluid balance once intravascular volume has been restored. Normal urine output is defined as 1.5 to 2 mL/kg per hour

- **Option B:** Micturition process entails contraction of the detrusor muscle and relaxation of the internal and external urethral sphincter. The process is slightly different based on age. Children younger than three years old have the micturition process coordinated by the spinal reflex.
- **Option C:** It starts with urine accumulation in the bladder that stretches the detrusor muscle causing activation of stretch receptors. The stretch sensation is carried by the visceral afferent to the sacral region of the spinal cord where it synapses with the interneuron that excites the parasympathetic neurons and inhibits the sympathetic neurons. The visceral afferent impulse concurrently decreases the firing of the somatic efferent that normally keeps the external urethral sphincter closed allowing reflexive urine output.
- **Option D:** Low bladder volume activates the pontine storage center which activates the sympathetic nervous system and inhibits the parasympathetic nervous system cumulatively allowing the accumulation of urine in the bladder. High bladder volume activates the pontine micturition center which activates the parasympathetic nervous system and inhibits the sympathetic nervous system as well as triggers awareness of a full bladder; consequently leading to relaxation of the internal sphincter and a choice to relax the external urethral sphincter once ready to void.

58. The nurse can expect a 60-year old patient with ischemic bowel to report a history of:

- A. Diabetes mellitus
- B. Asthma
- C. Addison's Disease
- D. Cancer of the bowel

Correct Answer: A. Diabetes mellitus

Ischemic bowel occurs in patients over 50 with a history of diabetes mellitus. Diabetes mellitus is the most common endocrine disorder affecting multiple organs including the gastrointestinal (GI) tract where manifestations and/or complications relate to disordered gut motility possibly as a result of autonomic neuropathy.

- **Option B:** Asthma is not related to an ischemic bowel. An increased prevalence of GI symptoms or complications has been documented in diabetic patients compared with nondiabetic control subjects including symptoms from both the upper and lower GI tract such as gastroparesis, anorexia, vomiting, early satiety, intestinal enteropathy, diarrhea, constipation, or fecal incontinence.
- **Option C:** Addison disease is an acquired primary adrenal insufficiency. A primary adrenal insufficiency is termed Addison disease when an autoimmune process causes the condition. It is a rare but potentially life-threatening emergency condition. It results from bilateral adrenal cortex destruction leading to decreased adrenocortical hormones, which may include cortisol, aldosterone, and androgens.
- **Option D:** Approximately 5% of patients with ischemic colitis have an obstructing lesion, usually in the distal colon. Half of these patients have colon cancer while the remainder has strictures caused by disorders such as diverticulitis, radiation, and previous surgery.

59. Which of the following cells is the precursor to the red blood cell (RBC)?

- A. B cell
- B. Macrophage
- C. Stem cell
- D. T cell

Correct Answer: C. Stem cell

The precursor to the RBC is the stem cell. B cells, macrophages, and T cells, and lymphocytes, not RBC precursors. Precursor cells are known as the intermediate cell before they become differentiated after being a stem cell. Usually, a precursor cell is a stem cell with the capacity to differentiate into only one cell type. Sometimes, precursor cells are used as an alternative term for unipotent stem cells.

- **Option A:** B cells are at the center of the adaptive humoral immune system and are responsible for mediating the production of antigen-specific immunoglobulin (Ig) directed against invasive pathogens (typically known as antibodies).
- **Option B:** Macrophages are specialized cells involved in the detection, phagocytosis, and destruction of bacteria and other harmful organisms. In addition, they can also present antigens to T cells and initiate inflammation by releasing molecules (known as cytokines) that activate other cells.
- **Option D:** T cells are so-called because they are predominantly produced in the thymus. They recognize foreign particles (antigen) by a surface-expressed, highly variable, T cell receptor (TCR).

60. A male client is hospitalized with fractures of the right femur and right humerus sustained in a motorcycle accident. Police suspect the client was intoxicated at the time of the accident. Laboratory tests reveal a blood alcohol level of 0.2% (200 mg/dl). The client later admits to drinking heavily for years. During hospitalization, the client periodically complains of tingling and numbness in the hands and feet. Nurse Gian realizes that these symptoms probably result from:

- A. Acetate accumulation
- B. Thiamine deficiency
- C. Triglyceride buildup.
- D. A below-normal serum potassium level

Correct Answer: B. Thiamine deficiency

Numbness and tingling in the hands and feet are symptoms of peripheral polyneuritis, which results from inadequate intake of vitamin B1 (thiamine) secondary to prolonged and excessive alcohol intake. Treatment includes reducing alcohol intake, correcting nutritional deficiencies through diet and vitamin supplements, and preventing such residual disabilities as foot and wrist drop.

- **Option A:** When thiamine stores are depleted (which takes about 4 weeks after stopping intake), symptoms start to appear. When evaluating for thiamine deficiency, the typical history may include poor nutritional intake, excessive alcohol intake, or the patient belonging to the special populations

of individuals previously mentioned (pregnant women, recipients of bariatric surgery, patients with prolonged diuretic use, anyone with poor overall nutritional status, etc.).

- **Option C:** Initial symptoms of B1 deficiency include anorexia, irritability, and difficulties with short-term memory. With prolonged thiamine deficiency, patients may endorse loss of sensation in the extremities, symptoms of heart failure including swelling of the hands or feet and chest pain related to demand ischemia, or feelings of vertigo, double vision, and memory loss. Additionally, close friends and family of the patient may describe confusion or symptoms of confabulation.
- **Option D:** Detection of thiamine deficiency relies on relevant history and physical exam findings and follow up with laboratory testing for confirmation. Functional enzymatic assay of transketolase activity is the activity of transketolase measured before and after the addition of thiamine pyrophosphate; >25% stimulation response is abnormal. Measurement of thiamine or the phosphorylated esters of thiamine in serum or blood using high-performance liquid chromatography is used. Urine studies exist but are not a reliable test for the evaluation of total body thiamine.

61. Prior to oral defense, a 21-year-old nursing student goes straight to the clinic due to tingling sensations, palpitations, and chest tightness. Deep, rapid breathing and carpal spasms are also observed. What is the nursing priority action for this situation?

- A. Give supplemental oxygen
- B. Allow the student to breathe into a paper bag
- C. Report to the physician immediately
- D. Get an order for an anxiolytic medication

Correct Answer: B. Allow the student to breathe into a paper bag

The student is hyperventilating secondary to anxiety, and breathing into a paper bag will provide rebreathing of carbon dioxide. Encouraging slow breathing will also help. The idea behind breathing into a paper bag or mask is that rebreathing exhaled air helps the body put CO₂ back into the blood.

- **Option A:** Acute anxiety may require treatment with a benzodiazepine. Chronic anxiety treatment consists of psychotherapy, pharmacotherapy, or a combination of both. Anxiety disorders appear to be caused by an interaction of biopsychosocial factors. Genetic vulnerability interacts with situations that are stressful or traumatic to produce clinically significant syndromes.
- **Option C:** Report it to the physician once there is a recurrence or the breathing did not improve. Anxiety is one of the most common psychiatric disorders but the true prevalence is not known as many people do not seek help or clinicians fail to make the diagnosis. Anxiety is one of the most common psychiatric disorders in the general population. Specific phobia is the most common with a 12-month prevalence rate of 12.1%. Social anxiety disorder is the next most common, with a 12-month prevalence rate of 7.4%.
- **Option D:** Selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), benzodiazepines, tricyclic antidepressants, mild tranquilizers, and beta-blockers treat anxiety disorders.

62. A nurse caring for a patient with an infectious disease who requires isolation should refer to guidelines published by the:

- A. National League for Nursing (NLN)
- B. Centers for Disease Control (CDC)
- C. American Medical Association (AMA)
- D. American Nurses Association (ANA)

Correct Answer: B. Centers for Disease Control (CDC)

The Center of Disease Control (CDC) publishes and frequently updates guidelines on caring for patients who require isolation. CDC is responsible for controlling the introduction and spread of infectious diseases, and provides consultation and assistance to other nations and international agencies to assist in improving their disease prevention and control, environmental health, and health promotion activities.

- **Option A:** The National League of Nursing's (NLN's) major function is accrediting nursing education programs in the United States. The NLN, the premier organization for nurse educators, offers professional development, teaching resources, research grants, testing services, and public policy initiatives to its 40,000 individual and 1,200 institutional members, comprising nursing education programs across higher education and health care.
- **Option C:** The American Medical Association (AMA) is a national organization of physicians. American Medical Association (AMA), organization of American physicians, the objective of which is "to promote the science and art of medicine and the betterment of public health." It was founded in Philadelphia in 1847 by 250 delegates representing more than 40 medical societies and 28 colleges.
- **Option D:** The American Nurses' Association (ANA) is a national organization of registered nurses. ANA guides the profession on issues of nursing practice, health policy, and social concerns that impact patient wellbeing. Through their position statements, ANA amplifies the voice of nurses and educates both consumers and policymakers.

63. Dr. Thompson, a seasoned endocrinologist, is presenting a case to a group of medical students. He discusses a 40-year-old woman, Mrs. Garcia, who presented with persistent hypertension, fatigue, and muscle weakness. Lab tests revealed abnormally high levels of a particular hormone responsible for sodium and potassium balance in the blood. As Dr. Thompson delves into the source of this hormone, he quizzes the students: "Considering Mrs. Garcia's condition, from which specific region of the adrenal glands would this hormone, notably a mineralocorticoid like aldosterone, originate?"

- A. Parafollicular cells
- B. Zona reticularis
- C. Zona glomerulosa
- D. Zona fasciculata

Correct Answer: C. Zona glomerulosa

The zona glomerulosa is the outermost layer of the adrenal cortex, responsible for producing mineralocorticoids, with aldosterone being the key hormone. Aldosterone plays a pivotal role in regulating sodium and potassium levels in the body, primarily influencing the reabsorption of sodium ions and the excretion of potassium ions in the kidneys.

- **Option A:** Parafollicular cells. These cells are located in the thyroid gland, not the adrenal glands. They are responsible for producing calcitonin, a hormone involved in calcium homeostasis.
- **Options B:** Zona reticularis. This is the innermost layer of the adrenal cortex. It primarily produces androgens, the precursors to male and female sex hormones.
- **Option D:** Zona fasciculata. This middle layer of the adrenal cortex predominantly produces glucocorticoids, such as cortisol, which are involved in glucose metabolism and the body's response to stress.

64. A child is admitted to the pediatric unit with a diagnosis of suspected meningococcal meningitis. Which of the following nursing measures should the nurse do first?

- A. Assess vital signs
- B. Institute seizure precautions
- C. Assess neurologic status
- D. Place in respiratory isolation

Correct Answer: D. Place in respiratory isolation

The initial therapeutic management of acute bacterial meningitis includes isolation precautions, initiation of antimicrobial therapy, and maintenance of optimum hydration. Nurses should take necessary precautions to protect themselves and others from possible infection. The patient with suspected or confirmed N. meningitidis should follow droplet precaution. This should be continued until after 24 hours of effective antibiotics administration.

- **Option A:** Prompt recognition and immediate initiation of treatment are of utmost importance in the management of bacterial meningitis. Patients can present with abnormal vital signs, including fever, tachypnea, tachycardia, and hypotension. Hypotension with elevated pulse rate is suggestive of early vascular instability.
- **Option B:** Complications of meningococcal meningitis can arise early or late in the disease course and can adversely impact morbidity and mortality. Late complications of meningococcal meningitis include chronic pain, skin scarring, and neurologic impairment. Other common complications include hearing impairment, visual impairment, and seizures.
- **Option C:** Assessment should be performed after the patient is placed on respiratory isolation in order to avoid infecting other patients. Prompt antibiotic administration, especially within one hour, has been proven to improve morbidity and mortality, as well as prevent complications such as increased intracranial pressure and septic shock.

65. The nurse prepares discharge instructions for a male client following cryosurgery for the treatment of a malignant skin lesion. Which of the following should the nurse include in the instruction?

- A. Avoid showering for 7 to 10 days
- B. Apply ice to the site to prevent discomfort
- C. Apply alcohol-soaked dressing twice a day
- D. Clean the site with hydrogen peroxide to prevent infection

Correct Answer: D. Clean the site with hydrogen peroxide to prevent infection

Cryosurgery involves the local application of liquid nitrogen to isolated lesions and causes cell death and tissue destruction. The nurse informs the client that swelling and increased tenderness of the treated area can occur when the skin thaws. Tissue freezing is followed by hemorrhagic blister formation in 1 to 2 days. The nurse instructs the client to clean the treatment site with hydrogen peroxide to prevent secondary infection. A topical antibiotic also may be prescribed.

- **Option A:** The client does not need to avoid showering.
- **Option B:** Application of a warm, damp washcloth intermittently to the site will provide relief from any discomfort.
- **Option C:** Alcohol-soaked dressings will cause irritation.

66. You are preparing a child for IV conscious sedation before the repair of a facial laceration. What information should you report immediately to the physician?

- A. The child suddenly pulls out the IV
- B. The parent is not sure regarding the child's tetanus immunization status
- C. The parent wants information about the IV conscious sedation
- D. The parent's refusal of the administration of the IV sedation

Correct Answer: D. The parent's refusal of the administration of the IV sedation.

The refusal of the parents is an absolute contraindication; therefore the physician must be notified. But the autonomy of parents is very obviously different from the autonomy of patients to make decisions for themselves. While adult patients are generally thought to have an absolute right to refuse medical treatment for themselves, we don't usually think that parents can refuse all medical treatment for their children.

- **Option A:** The RN can reestablish the IV access. Parents' views might, at least in some circumstances, influence whether or not treatment would be in a child's best interests. Nurses and doctors are able to administer fluid directly into the veins using IV therapy. IV therapy is a relatively simple process that can be performed by nurses, but there are serious complications associated with it.
- **Option B:** Tetanus status can be addressed later. Tetanus immunization is part of the DTaP (diphtheria, tetanus, and acellular pertussis) vaccinations. Kids usually get: a series of four doses of DTaP vaccine before 2 years of age. another dose at 4–6 years of age.
- **Option C:** The RN can provide information about conscious sedation. Identifying teachable moments in clinical practice is an effective way to increase workplace learning with all nurses playing a role, not just nurse educators.

67. Nurse Elizabeth is administering medication via the intraosseous route to a child. Intraosseous drug administration is typically used when a child is:

- A. Under age 3
- B. Over age 3
- C. Critically ill and under age 3

D. Critically ill and over age 3

Correct Answer: C. Critically ill and under age 3

In an emergency, intraosseous drug administration is typically used when a child is critically ill and under age 3. IO access provides a means of administering medications, glucose, and fluids, as well as (potentially) a means of obtaining blood samples. Such a situation would include any resuscitation; cardiopulmonary arrest; shock, regardless of etiology; life-threatening status epilepticus; or lack of venous access resulting from burns, edema, or obesity.

- **Option A:** In the 1980s, IO access was rediscovered as an immediately available tool in resuscitation situations, when time is of the essence and conditions may be adverse. Since then, IO access has become widely accepted in pediatric settings, especially because these patients often provide a particular challenge to obtaining rapid intravascular access.
- **Option B:** Initiation of IO access is indicated in adults, children, infants, or newborns in any clinical situation where vascular access is emergently needed but not immediately available via a peripheral vein.
- **Option D:** A retrospective study by Carlson et al found that in 2011, among out-of-hospital critical procedures provided for pediatric patients by emergency medical services in the United States, IO access was one of the most common.

68. Cholinergic agents are used to:

- A. Produce miosis
- B. Facilitate neuromuscular blockade
- C. Synergize neuromuscular blockers
- D. Facilitate tricyclic activity

Correct Answer: A. Produce miosis.

Miosis is a parasympathetic activity and is, therefore, the correct choice. Cholinergic medications are a category of pharmaceutical agents that act upon the neurotransmitter acetylcholine, the primary neurotransmitter within the parasympathetic nervous system (PNS). There are two broad categories of cholinergic drugs: direct-acting and indirect-acting. The direct-acting cholinergic agonists work by directly binding to and activating the muscarinic receptors. Indirect-acting cholinergic agents increase the availability of acetylcholine at the cholinergic receptors. B, C and D are incorrect because cholinergic agents are antidotes to neuromuscular blockers and tricyclic antidepressants.

- **Option B:** Acetylcholine is a major neurotransmitter in the body. Depending on the type of receptors through which it undergoes mediation, the peripheral actions of acetylcholine classify as working on muscarinic (M1, M2, M3, M4, M5) or nicotinic (Nm, Nn) receptors. M1 receptors are present on the gastric parietal cells and in the central nervous system. M2 receptors are present on the heart, visceral smooth muscle. M3 receptors on the smooth muscle, exocrine glands, and receptors of the bladder. Nicotinic receptors are present in the central nervous system, adrenal medulla, autonomic ganglia, and neuromuscular junction.
- **Option C:** The peripheral nervous system consists of the autonomic and the somatic nervous system. The autonomic nervous system can be further broken down into sympathetic and parasympathetic nervous systems. The parasympathetic nervous system regulates various organ and gland functions and primarily uses acetylcholine as its primary neurotransmitter, as do all the cholinomimetics.

- **Option D:** Anticholinesterase medications are agents that inhibit choline esterase, protect acetylcholine from hydrolysis, and produce cholinergic effects. Anticholinesterases further classify into reversible (carbamates) and irreversible agents (organophosphates).

69. A client with a cervical spine injury has Gardner-Wells tongs inserted for which of the following reasons?

- A. To hasten wound healing.
- B. To immobilize the cervical spine.
- C. To prevent autonomic dysreflexia.
- D. To hold bony fragments of the skull together.

Correct Answer: B. To immobilize the cervical spine.

Gardner-Wells, Vinke, and Crutchfield tongs immobilize the spine until surgical stabilization is accomplished. There are several uses for GWT, including the treatment of cervical spine fractures, patient positioning inside the operating room, and skeletal traction during spinal deformity surgery. Aside from GWT, different apparatuses have been utilized for skeletal traction, including Crutchfield's caliper, Cone's caliper, Blackburn's caliper, and halo traction.

- **Option A:** GWT have become popular in the United States due to their ease of use, and effectiveness in reducing cervical dislocations in a traumatic setting. Several advantages over previous traction devices include the lack of skin incisions, antiseptic instead of aseptic technique, and the lack of drill holes.
- **Option C:** Proper bladder and bowel care (ie, preventing fecal impaction, bladder distention) are mainstays in preventing episodes of autonomic dysreflexia. Regulation of the bladder routine via indwelling Foley catheter or intermittent catheterization and regular urologic follow-up is highly recommended for autonomic dysreflexia prevention.
- **Option D:** GWT has many advantages that have led to their increased popularity and usage. These include the relative ease of use, sterile technique, lack of incisions, reduced screw pullout, and elimination of burr holes.

70. Claire, a 33 y.o. is on your floor with a possible bowel obstruction. Which intervention is a priority for her?

- A. Obtain daily weights.
- B. Measure abdominal girth.
- C. Keep strict intake and output.
- D. Encourage her to increase fluids.

Correct Answer: B. Measure abdominal girth.

Measuring abdominal girth provides quantitative information about increases or decreases in the amount of distention. Abdominal girths should be measured daily. Use the same measuring tape each time. Place the patient in the same position each time. Ensure that the tape measure is placed in the same position each time. This can be done by drawing small tick marks on the patient's abdomen to indicate the position of the tape. Measure the patient at the same time each day.

- **Option A:** Weigh daily; provides information about dietary needs and effectiveness of therapy. Avoid or limit foods that might cause or exacerbate abdominal cramping, flatulence (milk products, foods high in fiber or fat, alcohol, caffeinated beverages, chocolate, peppermint, tomatoes, orange juice).
- **Option C:** Monitor I&O; closely. Fluid and electrolyte losses must be replaced. Record intake and changes in symptomatology. Useful in identifying specific deficiencies and determining GI response to foods. Monitor I&O.; Note number, character, and amount of stools; estimate insensible fluid losses (diaphoresis). Measure urine specific gravity; observe for oliguria.
- **Option D:** Administer parenteral fluids, blood transfusions as indicated. Maintenance of bowel rest requires alternative fluid replacement to correct losses and anemia. Fluids containing sodium may be restricted in presence of regional enteritis.

71. Physician's orders for a client with acute pancreatitis include the following: strict NPO, NG tube to low intermittent suction. The nurse recognizes that these interventions will:

- A. Reduce the secretion of pancreatic enzymes
- B. Decrease the client's need for insulin
- C. Prevent secretion of gastric acid
- D. Eliminate the need for analgesia

Correct Answer: A. Reduce the secretion of pancreatic enzymes

- Option A: Placing the client on strict NPO status will stop the inflammatory process by reducing the secretion of pancreatic enzymes. The use of low, intermittent suction prevents the release of secretion in the duodenum.
- Option B: The client requires exogenous insulin.
- Options C and D: These interventions do not prevent the secretion of gastric acid and do not eliminate the need for analgesia.

72. A client with osteoporosis is asking the nurse regarding the use of Salmon calcitonin (Miacalcin) nasal spray. The nurse tells the client to do the following, except?

- A. Delivery system contains enough medication for at least 30 doses. Discard any unused solution after 30 doses.
- B. If you do not feel the spray while using it, repeat the dose on the other nostrils.
- C. Miacalcin is usually given as one spray per day into only one of your nostrils.
- D. Take extra vitamin D while you are using Miacalcin.

Correct Answer: B. If you do not feel the spray while using it, repeat the dose on the other nostrils.

Miacalcin spray delivers a fine mist into the nose. Even if the client does not feel the spray while using it, the medication is still being absorbed by the nasal passages.

- **Option A:** Discard any unused solution after 30 doses because spray may not deliver the correct dose.
- **Option C:** Use the other nostril the next day and continue alternating back and forth for each daily dose.
- **Option D:** Vitamin D helps in treating osteoporosis by helping in maintaining healthy bones.

73. Nurse Linda is caring for a client with head injury and monitoring the client with decerebrate posturing. Which of the following is a characteristic of this type of posturing?

- A. Upper extremity flexion with lower extremity flexion
- B. Upper extremity flexion with lower extremity extension
- C. Extension of the extremities after a stimulus
- D. Flexion of the extremities after stimulus

Correct Answer: C. Extension of the extremities after a stimulus

Decerebrate posturing is the extension of the extremities after a stimulus which may occur with upper brain stem injury. Decerebrate posturing is described as adduction and internal rotation of the shoulder, extension at the elbows with pronation of the forearm, and flexion of the fingers.

- **Option A:** Decerebrate posturing is the extension, not flexion, of extremities. As with decorticate posturing, the lower limbs show extension and internal rotation at the hip, with the extension of the knee and plantar flexion of the feet. Toes are typically abducted and hyperextended.
- **Option B:** The upper extremity should be in extension as well as the lower extremity. Decerebrate posturing can be seen in patients with large bilateral forebrain lesions with progression caudally into the diencephalon and midbrain. It can also be caused by a posterior fossa lesion compressing the midbrain or rostral pons.
- **Option D:** There is an extension of extremities after a stimulus in decerebrate posturing. Teasdale and Jennett advocated not using the term 'decerebrate' in the assessment of coma due to its association with a specific physio anatomical correlation, but to rather use the term 'extension.'

74. Cely with manic episodes is taking lithium. Which electrolyte level should the nurse check before administering this medication?

- A. Calcium
- B. Sodium
- C. Chloride
- D. Potassium

Correct Answer: B. Sodium

Lithium is chemically similar to sodium. If sodium levels are reduced, such as from sweating or diuresis, lithium will be reabsorbed by the kidneys, increasing the risk of toxicity. Clients taking lithium shouldn't restrict their intake of sodium and should drink adequate amounts of fluid each day. It is also important to monitor patients for dehydration and lower the dose when there are signs of infection, excessive sweating, or diarrhea. Toxic levels are when the drug level is more than 2 mEq/L.

- **Option A:** Lithium modifies sodium transport in nerve and muscle cells. It alters the metabolism of neurotransmitters, specifically catecholamines, and serotonin. It may alter intracellular signaling via second messenger systems by inhibition of inositol monophosphate. This inhibition, in turn, affects neurotransmission through the phosphatidylinositol secondary messenger system.
- **Option C:** Before starting treatment with lithium, it is essential to get kidney function tests and thyroid function tests. In patients above 50 years of age, an electrocardiogram is also necessary. Repeat these tests once or twice a year in patients on lithium therapy. Because lithium is associated with weight gain, it is important to weigh a patient before starting treatment. It is also beneficial to determine if the patient has prediabetes, diabetes, or dyslipidemia.
- **Option D:** The other electrolytes are important for normal body functions but sodium is most important to the absorption of lithium. Monitoring of therapeutic levels includes trough plasma levels drawn 8 to 12 hours after the last dose. The therapeutic range is 1.0 to 1.5 mEq/L for acute treatment and 0.6 to 1.2 mEq/L for chronic therapy. Monitoring should be done every 1 to 2 weeks until reaching the desired therapeutic levels. Then, check lithium levels every 2 to 3 months for six months.

75. In a gravido-cardiac mother, the first 2 hours postpartum (4th stage of labor and delivery) particularly in a cesarean section is a critical period because at this stage

- A. There is a fluid shift from the placental circulation to the maternal circulation which can overload the compromised heart.
- B. The maternal heart is already weak and the mother can die.
- C. The delivery process is strenuous to the mother.
- D. The mother is tired and weak which can distress the heart.

Correct Answer: A. There is a fluid shift from the placental circulation to the maternal circulation which can overload the compromised heart.

During the pregnancy, there is an increase in maternal blood volume to accommodate the need of the fetus. When the baby and placenta have been delivered, there is a fluid shift back to the maternal circulation as part of physiologic adaptation during the postpartum period. In a cesarean section, the fluid shift occurs faster because the placenta is taken out right after the baby is delivered giving it less time for the fluid shift to gradually occur.

- **Option B:** Heart rate increases in a linear fashion during pregnancy by 10 to 20 bpm over baseline and returns to pre-pregnant levels in 6 weeks postpartum. There is ventricular remodeling during pregnancy and left ventricular wall thickness and mass increase by 28% to 52% above pre-pregnancy values. Cardiac contractility and ventricular ejection fraction don't undergo any significant change during the entire peripartum period.
- **Option C:** There is generalized physical fatigue immediately after delivery. The pulse rate may be elevated a few hours after the childbirth, due to excitement or pain, and usually normalizes on the second day. The blood pressure could be elevated due to pain or excitement but is generally in the normal range
- **Option D:** Cardiac output increases throughout pregnancy. However, in the immediate postpartum period, following delivery, there is an increase in circulating blood volume from the contraction of the uterus and an increase in preload from the relief of inferior vena cava obstruction, leading to an increase in stroke volume and heart rate leading to a 60 to 80% rise in cardiac output, which rapidly declines to pre-labor values in 1 to 2 hours following delivery and to pre-pregnancy values in two

weeks postpartum.

76. Nurse Keith is conducting a session about the principles of first aid and is discussing the interventions for a snakebite to an extremity. He should inform those attending the session that the first priority intervention in the event of this occurrence is which of the following?

- A. Remove jewelry and constricting clothing from the victim.
- B. Move the victim to a safe area away from the snake and encourage the victim to rest.
- C. Immobilize the affected extremity.
- D. Place the extremity in a position so that it is below the level of the heart.

Correct Answer: B. Move the victim to a safe area away from the snake and encourage the victim to rest.

The first priority in case of a snakebite is to move the victim to a safe area away from the snake and encourage the client to rest to decrease venom circulation.

- **Option A:** Removing jewelry or constricting clothing from the victim right away, before any swelling begins, but moving the victim safely away from the snake is a more priority action.
- **Options C & D:** Immobilize the affected extremity and keep it below the level of the heart. Immobilization is done to slow the movement of venom through the lymphatic system. And prevent it from spreading.

77. You are assigned to provide nursing care for a patient receiving mechanical ventilation. Which action should you delegate to an experienced nursing assistant?

- A. Assessing the patient's respiratory status every 4 hours
- B. Taking vital signs and pulse oximetry readings every 4 hours
- C. Checking the ventilator settings to make sure they are as prescribed
- D. Observing whether the patient's tube needs suctioning every 2 hours

Correct Answer: B. Taking vital signs and pulse oximetry readings every 4 hours

The nursing assistant's educational preparation includes measurement of vital signs, and an experienced nursing assistant would know how to check oxygen saturation by pulse oximetry. The staff members' levels of education, knowledge, past experiences, skills, abilities, and competencies are also evaluated and matched with the needs of all of the patients in the group of patients that will be cared for.

- **Option A:** Delegation should be done according to the differentiated practice for each of the staff members. Some needs require high levels of professional judgment and skill; and other patient needs are somewhat routine and without the need for high levels of professional judgment and skill.
- **Option C:** Assessing and observing the patient, as well as checking ventilator settings, require the additional education and skills of the RN. The scope of practice for the registered nurse will most likely include the legal ability of the registered professional nurse to perform all phases of the nursing process including assessment, nursing diagnosis, planning, implementation and

evaluation.

- **Option D:** Among the tasks that cannot be legally and appropriately delegated to nonprofessional, unlicensed assistive nursing personnel, such as nursing assistants, patient care technicians, and personal care aides, include assessments, nursing diagnosis, establishing expected outcomes, evaluating care and any and all other tasks and aspects of care including but not limited to those that entail sterile technique, critical thinking, professional judgment and professional knowledge.

78. A nurse is reviewing the record of a client in the labor room and notes that the nurse-midwife has documented that the fetus is at (-1) station. The nurse determines that the fetal presenting part is:

- A. 1 cm above the ischial spine
- B. 1 fingerbreadth below the symphysis pubis
- C. 1 inch below the coccyx
- D. 1 inch below the iliac crest

Correct Answer: A. 1 cm above the ischial spine

Station is the relationship of the presenting part to an imaginary line drawn between the ischial spines, is measured in centimeters, and is noted as a negative number above the line and a positive number below the line. At -1 station, the fetal presenting part is 1 cm above the ischial spines.

- **Option B:** The doctor will assign a number from -5 to +5 to describe where the baby is in relation to the ischial spines. The ischial spines are bony protrusions located in the narrowest part of the pelvis. During a vaginal exam, the doctor will feel for the baby's head. If the head is high and not yet engaged in the birth canal, it may float away from their fingers.
- **Option C:** When the baby's head is level with the ischial spines, the fetal station is zero. Once the baby's head fills the vaginal opening, just before birth, the fetal station is +5.
- **Option D:** Usually about two weeks before delivery, the baby will drop into the birth canal. This is called being "engaged." At this point, the baby is at station 0. This drop into the birth canal is called a lightening.

79. A client with head trauma develops a urine output of 300 ml/hr, dry skin, and dry mucous membranes. Which of the following nursing interventions is the most appropriate to perform initially?

- A. Evaluate urine specific gravity.
- B. Anticipate treatment for renal failure.
- C. Provide emollients to the skin to prevent breakdown.
- D. Slow down the IV fluids and notify the physician.

Correct Answer: A. Evaluate urine specific gravity.

Urine output of 300 ml/hr may indicate diabetes insipidus, which is a failure of the pituitary to produce the antidiuretic hormone. This may occur with increased intracranial pressure and head trauma; the nurse evaluates for low urine specific gravity, increased serum osmolarity, and dehydration.

- **Option B:** There's no evidence that the client is experiencing renal failure. The most common findings in patients with diabetes insipidus are polydipsia, polyuria, and nocturia. Additional symptoms in patients with diabetes insipidus may include weakness, lethargy, fatigue, and myalgias.
- **Option C:** Providing emollients to prevent skin breakdown is important, but doesn't need to be performed immediately. Central diabetes insipidus is diagnosed when there is evidence of plasma hyperosmolality (greater than 300 mosm/l), urine hyperosmolality (less than 300 mosm/l or urine/plasma osmolality less than 1), with polyuria (urinary volume greater than 4 mL/kg/hr to 5 mL/kg/hr for two consecutive hours after surgery).
- **Option D:** Slowing the rate of IV fluid would contribute to dehydration when polyuria is present. In cases of nephrogenic diabetes insipidus, water deprivation suboptimally increases urine osmolality. DDAVP minimally increases urine osmolality in partial nephrogenic diabetes insipidus, with no increase in urine osmolality in complete nephrogenic diabetes insipidus.

80. Nurse Cecile is teaching a female client about preventing osteoporosis. Which of the following teaching points is correct?

- A. Obtaining an X-ray of the bones every 3 years is recommended to detect bone loss.
- B. To avoid fractures, the client should avoid strenuous exercise.
- C. The recommended daily allowance of calcium may be found in a wide variety of foods
- D. Obtaining the recommended daily allowance of calcium requires taking a calcium supplement.

Correct Answer: C. The recommended daily allowance of calcium may be found in a wide variety of foods.

Premenopausal women require 1,000 mg of calcium per day. Postmenopausal women require 1,500 mg per day. It's often, though not always, possible to get the recommended daily requirement in the foods we eat.

- **Option D:** Supplements are available but not always necessary.
- **Option A:** Osteoporosis doesn't show up on ordinary X-rays until 30% of the bone loss has occurred. Bone densitometry can detect bone loss of 3% or less. This test is sometimes recommended routinely for women over 35 who are at risk.
- **Option B:** Strenuous exercise won't cause fractures. Weight-bearing aerobics exercises and resistance training are good for people with osteoporosis.

81. Which is the desired outcome in conducting desensitization:

- A. The client verbalizes his fears about the situation.
- B. The client will voluntarily attend group therapy in the social hall.
- C. The client will socialize with others willingly.
- D. The client will be able to overcome his disabling fear.

Correct Answer: D. The client will be able to overcome his disabling fear.

The client will overcome his disabling fear by gradual exposure to the feared object. This therapy aims to remove the fear response of a phobia, and substitute a relaxation response to the conditional

stimulus gradually using counter conditioning. The progressive structure of systematic desensitization allows the patient to control the steps he/she must make until fear is overcome. This absence of disturbing elements makes this technique less likely to provoke abandonment of the therapy.

- **Option A:** Behavior therapy is the most effective treatment for phobias is behavioral therapy. This includes systematic desensitization and flooding. In methodical desensitization, the patient is exposed to a list of stimuli ranging from the least to the most anxiety-provoking. With this method, patients are taught various techniques to deal with anxiety such as relaxation, breathing control, and cognitive approaches.
- **Option B:** The cognitive-behavioral approach includes reinforcing the realization that the phobic stimulus is safe. As the patient masters these techniques, they are taught to use them in the face of anxiety-provoking stimuli and induce relaxation. As the patients become desensitized to each stimulus on the scale, they keep moving up until the most anxiety-provoking stimuli no longer elicit any fear or anxiety.
- **Option C:** To be successful, behavioral therapy requires that the patient be committed to the treatment, there are distinctly identified problems and objectives, and there are alternative strategies for dealing with the patient's feelings. Other treatment modalities include hypnosis, supportive therapy, and family therapy. The goal of all 3 forms of therapy is to help the patient recognize that the feared stimulus is not dangerous and to provide emotional support.

82. Which client(s) are appropriate to assign to the LPN/LVN, who will function under the supervision of the RN or team leader? Select all that apply.

- A. A client who needs pre-op teaching for use of a PCA pump.
- B. A client with a leg cast who needs neurologic checks and PRN hydrocodone.
- C. A client post-op toe amputation with diabetic neuropathic pain.
- D. A client with terminal cancer and severe pain who is refusing medication.

Correct Answer: B & C.

The clients with the cast and the toe amputation are stable clients and need ongoing assessment and pain management that are within the scope of practice for an LPN/LVN under the supervision of an RN. The RN should take responsibility for preoperative teaching, and terminal cancer needs a comprehensive assessment to determine the reason for refusal of medication.

- **Option A:** Preoperative teaching is a nursing responsibility. Proper and appropriate assignments facilitate quality care. Improper and inappropriate assignments can lead to poor quality of care, disappointing outcomes of care, the jeopardization of client safety, and even legal consequences.
- **Option B:** The clients with the cast are within the scope of practice for an LPN/LVN under the supervision of an RN. Delegation, simply defined, is the transfer of the nurse's responsibility for the performance of a task to another nursing staff member while retaining accountability for the outcome. Responsibility can be delegated. Accountability cannot be delegated. The delegating registered nurse remains accountable for all client care despite the fact that some of these aspects of care can, and are, delegated to others.
- **Option C:** The client with the toe amputation is a stable client and needs ongoing assessment and pain management that are within the scope of practice for an LPN/LVN under the supervision of an RN. The staff members' levels of education, knowledge, past experiences, skills, abilities, and competencies are also evaluated and matched with the needs of all of the patients in the group of patients that will be cared for.

- **Option D:** A client with terminal cancer and severe pain who is refusing medication is a nursing responsibility. Based on these characteristics and the total client needs for the group of clients that the registered nurse is responsible and accountable for, the registered nurse determines and analyzes all of the health care needs for a group of clients; the registered nurse delegates care that matches the skills of the person that the nurse is delegating to.

83. The biopsy of Mr. Gonzales confirms the diagnosis of cirrhosis. Mr. Gonzales is at increased risk for excessive bleeding primarily because of:

- A. Impaired clotting mechanism
- B. Varix formation
- C. Inadequate nutrition
- D. Trauma of invasive procedure

Correct Answer: A. Impaired clotting mechanism

Cirrhosis of the liver results in decreased Vitamin K absorption and formation of clotting factors resulting in impaired clotting mechanism.

- **Option B:** Esophageal varices sometimes form when blood flow to the liver is blocked, most often by scar tissue in the liver caused by liver disease.
- **Option C:** Inadequate nutrition alone cannot cause excessive bleeding in cirrhosis.
- **Option D:** An invasive procedure may cause trauma that may result in bleeding, but the client has not yet undergone any invasive procedure.

84. A camp nurse is applying sunscreen to a group of children enrolled in swim classes. Chemical sunscreens are most effective when applied:

- A. Just before sun exposure
- B. 5 minutes before sun exposure
- C. 15 minutes before sun exposure
- D. 30 minutes before sun exposure

Correct Answer: D. 30 minutes before sun exposure

- Option D: Sunscreens of at least an SPF of 15 should be applied 20–30 minutes before going into the sun to allow the product to bind into the skin.
- Options A, B, and C: These do not allow sufficient time for sun protection.

85. According to Erikson's stage of growth and development, the developmental task of an 8-year old child is:

- A. Trust
- B. Initiative
- C. Independence

D. Industry

Correct Answer: D. Industry

- Option D: According to Erikson's Psychosocial Developmental Theory, the developmental task of middle childhood (5-12 years old) is industry versus inferiority. Children in this stage are developing a sense of productivity, self-assurance, and self-esteem.
- Option A: Trust is the developmental task of infancy (12-18 months of age).
- Option B: Initiative is the developmental task of the school-age child (3-5 years old).
- Option C: Independence is not one of Erikson's developmental stages.